Final Report of the 1st Air Cavalry Brigade Expeditionary Deployment to the USAREUR Area of Responsibility in Support of Atlantic Resolve

December 2016 – November 2017

Headquarters, 1st Air Cavalry Brigade

1st Cavalry Division

Fort Hood, Texas – Illesheim Kaserne, Germany

Part 1: Forward

Now, more than ever, U.S. Army aviation assets are in high demand as part of the U.S. Army's dynamic presence in USAREUR. Building a "Strong Europe", through regionally aligned forces (RAF) in a highly energized environment presents complex challenges for combat aviation brigades (CAB) transitioning from their home station into the European theater. Army forces deploying to Europe conduct expeditionary maneuver through rapid deployment and immediately transition to operations that demonstrate their ability to fight and win in decisive action. Successful reception, staging, onward movement, and integration (RSOI) into any COCOM theater is critical in order to effectively demonstrate the Army's expeditionary combat capabilities to America's Allies and Partners, as well as any potential adversaries.

As a RAF CAB assigned to USAREUR, the 1st Air Cavalry Brigade (1ACB) deployed form Ft. Hood, Texas to Illesheim, Germany in the fall of 2017. Within 21 days of arrival by sea vessel at the sea port of debarkation (SPOD) in Belgium, 1ACB conducted RSOI tasks and successfully demonstrated combat capabilities during company-level training exercises and live fires. The 1ACB's actions during the initial phases of deployment to Europe were exceptional.

Future RAF CABs will more easily project aviation combat power and ease the transition from home station into any COCOM theater by applying the lessons learned from the 1ACB's deployment, logistical systems, and processes. This paper is designed to assess the different aviation-specific considerations and requirements necessary to achieve success during RSOI.

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Part 2: Executive Summary and Chronology

The Army presented the 1st Air Cavalry Brigade (1ACB) a difficult problem statement in December 2016: deploy four battalions and the brigade headquarters, along with all organic personnel and equipment, to Europe in support of ATLANTIC RESOLVE in the fall of 2017. Prior to the deployment, institutional knowledge on expeditionary operations was lacking across the formation; many leaders within the brigade had not previously been required to self-deploy their organizations during earlier rotations to Iraq and Afghanistan. To further complicate the 1ACB situation, the European area of responsibility (AOR) presented poor flying weather during the deployment window, and a near peer threat with active integrated air defense systems (IADS) distributed throughout Eastern Europe. In order to reassure NATO allies, deter aggression, and meet the requirements of the U. S. European Command (USEUCOM) combatant commander, 1ACB leaders would be required to quickly self-deploy and demonstrate their combat capabilities within the first 21 days of their deployment.

The 1ACB command and staff analyzed the problem and conducted the Military Decision Making Process (MDMP) in order to develop a plan to train the brigade for the unique challenges posed by the U.S. Army Europe (USAREUR) AOR. The brigade planners designed a culminating training exercise, Operation SILVER BAYONET 1, in order to train and certify subordinate units for deployment to Europe in support of ATLANTIC RESOLVE 2017-2018. This plan would be critical to preparing the brigade to build combat power during reception, staging, onward movement, and integration (RSOI) into the USAREUR AOR. SILVER BAYONET 1 served as a key rehearsal for the 1ACB mission during RSOI.

In September of 2017, 1ACB conducted port of embarkation operations at the port in Corpus Christi, Texas. In four days, 77 aircraft from across the brigade were prepared for sea vessel shipment to Europe. In October of 2017, elements from across 1ACB deployed to begin operations at the port of debarkation (SPOD) in Zeebrugge, Belgium. In two and a half days (a total of 58 hours), the port was clear of the 77 aircraft the brigade shipped via strategic sea lift. 1ACB clearly demonstrated the Army's ability to quickly deploy trained and ready combat formations into Europe, sending a strategic message to NATO Allies and Partners, as well as potential adversaries around the world.

The 1ACB deployment to Europe was labeled Operation AIR CAV BLUEHEARTS.

Mission: On or about 22 OCT 2017, deploy through the port of Zeebrugge, Belgium, into the USAREUR AOR in support of ATLANTIC RESOLVE in order to assume the "Ready to Fight" and regionally aligned force mission.

Purpose: The purpose of this operation was to rapidly build combat power at the brigade's intermediate staging bases (ISBs) within Europe. This will demonstrate the 1ACB capability to provide dynamic presence, reassuring allies and partners of the United States' commitment to deterring aggression in Europe.

Key Tasks:

- Establish mission command nodes capable of maintaining 100% accountability of personnel and equipment at all times
- Execute a rate of assembly at port that enables the 1ACB to occupy tactical assembly areas (TAAs) at Illesheim and Katterbach NLT 14 days after the vessel arrives at the SPOD
- Execute a brigade-level "Ready to Fight" demonstration within 21 days of arrival at the SPOD
- Protect the force through European cultural awareness and adherence to risk management
- Establish a sustainment footprint capable of supporting massed combat power during operations
- Recover all 1ACB containers, wheeled vehicles, and aircraft to their respective enduring locations once the port and "Ready to Fight" demonstrations are complete

End State: 1ACB assumes the "Ready to Fight" and regionally aligned force mission with formations set at their enduring locations as a dynamic presence, prepared to sustain readiness and support the USAREUR commander with U.S. Army aviation combat power.

Chronology of Events

DEC 2016	Deployment notification
JAN-FEB 2017	Mission analysis and design training plan
MAR-APR 2017	Staff training exercises, aviation gunnery tables 3-6, and 7-9
MAY-JUN 2017	Operation SILVER BAYONET 1 culminating training exercise
JUL-AUG 2017	Operation SILVER BAYONET 2 mission command exercise
SEP 2017	Container, wheeled vehicle, and aircraft movement to SPOE
20 OCT 2017	Begin Operation AIR CAV BLUEHEARTS, ramp down at SPOD
22 OCT 2017	SPOD cleared of aircraft
02 NOV 2017	ISB at Chievres Air Base, Belgium clear of aircraft and personnel
10 NOV 2017	"Ready to Fight" demonstration complete, end Operation AIR CAV BLUEHEARTS

Key Lessons Learned

- **Aviation mission planning at home station**
    - 1ACB aviation planners developed flight plans from the SPOD to the ISB/TAA 60 days in advance of actual execution. This allowed the 1ACB to deploy specific aviation crews in the first main body flights to Europe

and ensure that aircraft assembled at the SPOD were quickly moved on to the ISB. This also helped the 1ACB forecast cross-border movement requirements, and modify the flight plan based on weather impacts.

- **Intermediate Staging Base (ISB) selection**
    - The 1ACB intermediate staging base was located at Chievres Air Base, Belgium, a NATO airfield operated by the U.S. Air Force. ISB Chievres was located approximately 60 miles from the SPOD, which allowed 1ACB to stage pilots and crews at the ISB and then conduct a 30-minute flight from the SPOD to the ISB, effectively clearing the SPOD of all aircraft and crews 58 hours after the vessel arrived at the port.
- **Pre-deployment RSOI training**
    - 1ACB conducted a pre-deployment culminating training event (CTE) which trained the brigade in anticipated RSOI tasks and set conditions to meet the USAREUR commander's "Ready to Fight" timeline within 21 days of the deployment. The CTE exercised deployment and reception tasks at multiple Ft. Hood facilities, including the arrival departure air control group (A/DACG), rail operations center (ROC), and the deployment ready reaction field (DRRF).

Part 3: Background information

Defining the Problem and the EUCOM Operational Environment (OE)

In December 2016, the Army informed the leadership of the 1ACB that four of five battalions and the brigade headquarters would deploy to the USAREUR AOR in the fall of 2017. The deployment announcement in December 2016 came as a surprise to many, as the unit's multiple previous deployments had been to Iraq and Afghanistan in the aftermath of September 11, 2001, and many personnel were unfamiliar with the Army's ongoing operations in Europe. The Army began deploying regionally aligned forces (RAF) to Europe in 2014, when USAREUR launched ATLANTIC RESOLVE in response to the Russian Federation's illegal annexation and occupation of Ukrainian territory in Crimea. 1ACB is the second RAF combat aviation brigade deployed to Europe as part of ATLANTIC RESOLVE.

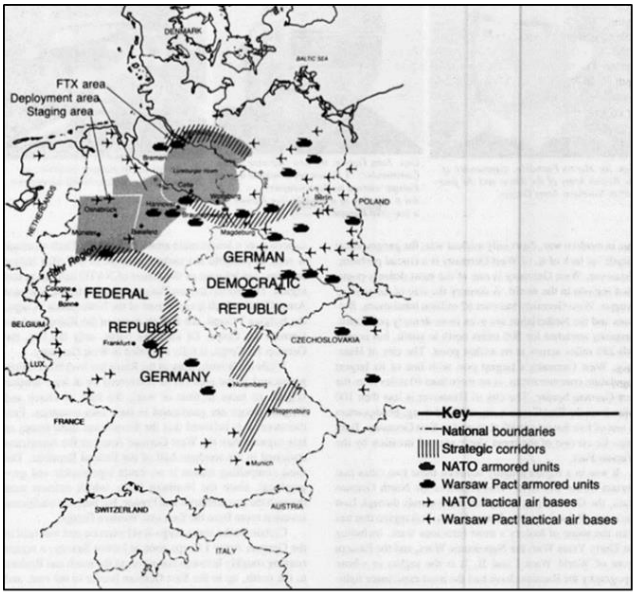
USAREUR reoriented its strategic focus in early 2014 due to changes in the security environment, now referred to as the "New European Security Environment." By 2015, four security challenges emerged in the AOR, which drove USAREUR to reframe their campaign plan: a reinvigorated Russian Federation; terrorism stemming from the Syrian civil war and instability in North Africa; continued threats to Israel; and the largest mass migration into Europe since World War II brought about by the ongoing Syrian civil war. In 2016 USAREUR transitioned the command's Theater Security Cooperation (TSC) focus from assurance of Allies and partners, to deterring aggression from potential adversaries. The European operational environment posed several challenges to 1ACB that few officers and planners had experienced during their Army careers.

While the USAREUR is not at war in Europe, they are executing an extensive deterrence mission against an aggressive Russian Federation seeking to intimidate its neighbors in what they term their "near abroad." Deterring aggression and reassuring NATO Allies of the U.S. commitment to the Alliance require the Army to demonstrate combat capabilities and proficiency by swiftly deploying units into the theater, and demonstrating their readiness to conduct Unified Land Operations (ULO). In addition, units deploying to Europe are required to deploy with all of their organic equipment, showcasing the Army's ability to rapidly deploy combat formations from the U.S. to any location worldwide. There are very few pre-positioned vehicle stocks in Europe, which poses a major challenge for leaders accustomed to assuming theater-provided equipment in Iraq and Afghanistan. 1ACB would need to conduct RSOI into the theater using their organic personnel and equipment to download, build, and maintain all aircraft. The RSOI process would require detailed coordination with NATO Allies and the Office of Defense Cooperation (ODC) staff working at the U.S. embassy in each nation. Finally, the initial months of the 1ACB deployment, October and November, offered historically poor weather, with low cloud ceilings, degraded visibility, and waning hours of sunlight that would limit the available flight time for 1ACB pilots and crews.

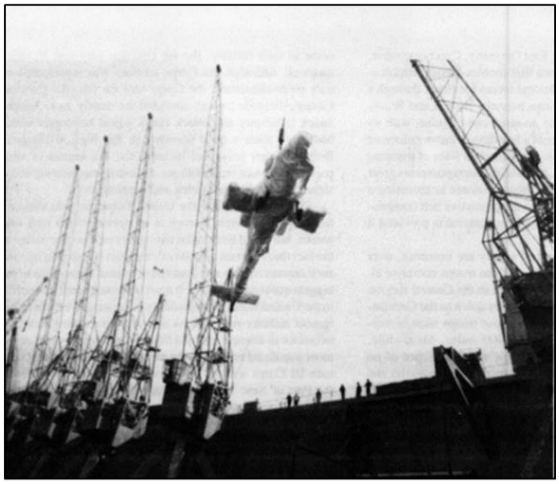
Given the pace and recurrence of deploying to the wars in Iraq and Afghanistan, many leaders in the 1ACB were unfamiliar with expeditionary Army capabilities and the Army Power Projection Program (AP3) as outlined in Army doctrine.[1] The Army had previously built expeditionary skills by deploying rotational forces to Europe from the late 1960s to the early 1990s in support of the REFORGER exercises.

The "Return of Forces to Germany" (REFORGER) was designed to demonstrate the United States' ability to quickly move troops to Europe during the Cold War. The exercises deployed tens of thousands of American forces to Europe annually. REFORGER enhanced the military's capabilities at expeditionary warfare, demonstrated U.S. capabilities to the Soviet Union, and reassured NATO Allies of the U.S. commitment to the Alliance. The 1st Cavalry Division deployed with the III Armored Corps from Ft. Hood, Texas, to Holland and Northern Germany in 1983 for REFORGER 'Confident Enterprise' and in 1987 for REFORGER 'Certain Strike.' While much of the III Corps equipment remained in Europe as prepositioned stocks, known as Prepositioning of Materiel Configured in Unit Sets (POCMUS), aviation units from the 1st Cavalry Division deployed from the continental United States to Europe on strategic lift assets.[2] The 1ACB returned to Europe in 2017 for ATLANTIC RESOLVE and conducted a deterrence mission under similar circumstances.[3]

Figure 1: The 1st Cavalry Division and REFORGER



1987 REFORGE exercise 'Certain Strike' saw the entire 1st Cavalry Division and the 1st Air Cavalry Brigade deployed to Europe.



U.S. helicopters arriving at the port of Rotterdam for the 1987 REFORGE exercise.

Following the 2014 Russian incursion in Ukraine, many security experts called for increased deployments of Army units to Europe in order to relearn the expeditionary skills that had atrophied during the wars in Iraq and Afghanistan. The Alliance's strength lies in its ability to project the image and maintain the reality of strength, confidence and integration.[4] The ATLANTIC RESOLVE mission demanded that Army RAF units assigned to the Europe exercise expeditionary deployment operations and

demonstrate the ability to rapidly deploy and deliver forces to the point of employment in any operational environment, with the ability to operate effectively upon arrival.[5]

The U.S. Army Europe commander's mission for ATLANTIC RESOLVE was to provide trained and ready land forces across the USAREUR AO to assure NATO Allies, deter Russia from further aggression, and protect U.S. personnel and interests. The USAREUR team emphasized several major efforts that contribute to deterrence and reassurance for tactical units. The first is a culture of readiness for units to be "Ready to Fight": having trained personnel and serviceable equipment prepositioned to respond to any crisis within 96 hours. The second component is speed of assembly: the ability to move and deliver forces and effects across the AOR in a timely manner. The first major test for any RAF unit deploying to Europe, and the unit's most important demonstration of combat capability, is conducting RSOI into the theater.

When forward deployed to Europe, 1ACB's area of operations (AO) would consist of the entire European continent, with the primary concentration of aviation combat power stationed in central Germany but prepared to deploy to the eastern European nations that border the Russian Federation. Within the AO, AORs are divided into three regions: ATLANTIC RESOLVE North (AR-N) consisting of the Baltic States, ATLANTIC RESOLVE Center (AR-C) consisting of Poland, Hungary, and Slovakia, and ATLANTIC RESOLVE South (AR-S) consisting of the Balkan states of Romania and Bulgaria. Upon arriving into the European theater, 1ACB would have 21 days to build combat power at the SPOD, move combat power to forward locations, and demonstrate combat capabilities by conducting training exercises integrated with NATO Allies.

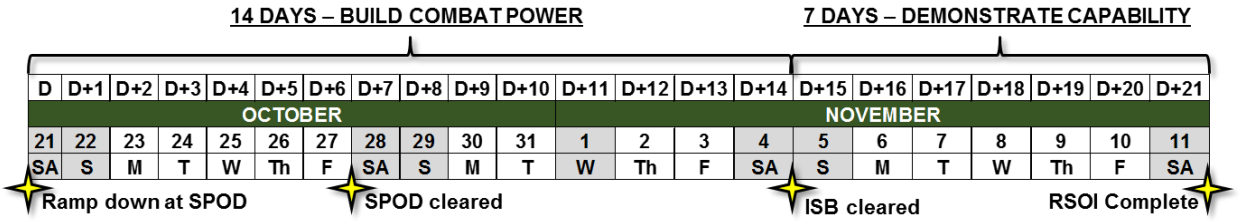


Figure 2: 1ACB developed a 21 day RSOI and 'Ready to Fight' timeline in order to meet USAREUR commander's intent

Expeditionary CAB Deployment and Army Doctrine

Joint Publication 3-35 (Deployment and Redeployment) defines RSOI as the process that transitions deploying or redeploying forces, consisting of personnel, equipment, and materiel, into forces capable of meeting the combatant commander's operational requirement.[6] In order for RSOI to be effective, the capability of strategic lift to move personnel, equipment, and materiel to reception points (SPOD, ISB, etc.) must be matched by the capability to receive and process the force. While DoD strategic lift assets would deliver 1ACB to the theater's SPOD or airport of debarkation (APOD), the brigade would need to effectively receive and move the personnel, aircraft, vehicles, and equipment forward in order to meet the USAREUR commander's vision and intent.

JP 3-35 outlines the broad concepts and tasks that a unit must consider during RSOI. The commander must establish unity of command and unity of effort through detailed planning and orders that nest subordinate efforts with the overall commander's intent. A commander achieves balance by managing the time phased force deployment data (TPFDD) and adjusting the movement schedule as conditions change. Commanders must pursue synchronization within the RSOI process by operationalizing their strategic move; they must link deploying personnel, equipment, and materiel to effectively build combat power in the theater. JP 3-35 summarized the importance of synchronization, stating "...synchronization occurs when the right units, equipment, supplies, and capabilities arrive in the correct order at the appropriate locations, and supporting activities are coordinated in such a fashion to operate in consonance with one another so that the tempo of force deployment, planning, and execution is uninterrupted."[7] 1ACB would need to effectively manage personnel, critical aviation maintenance equipment, and mission command systems to achieve successful RSOI into Europe and meet the USAREUR commander's intent.

There is no existing Army doctrine to help a combat aviation brigade (CAB) define and understand aviation-specific RSOI requirements. 1ACB leaders and planners established a doctrinal template for how to flow an aviation unit into Europe (see figure 3). In an operational environment unconstrained by weather, terrain, and enemy effects, an Army CAB could best deploy to Europe through one SPOD. Personnel would arrive via strategic lift at an APOD close to the SPOD, and establish mission command cells at both the SPOD and an intermediate staging base (ISB) within a 60-mile radius of the port.

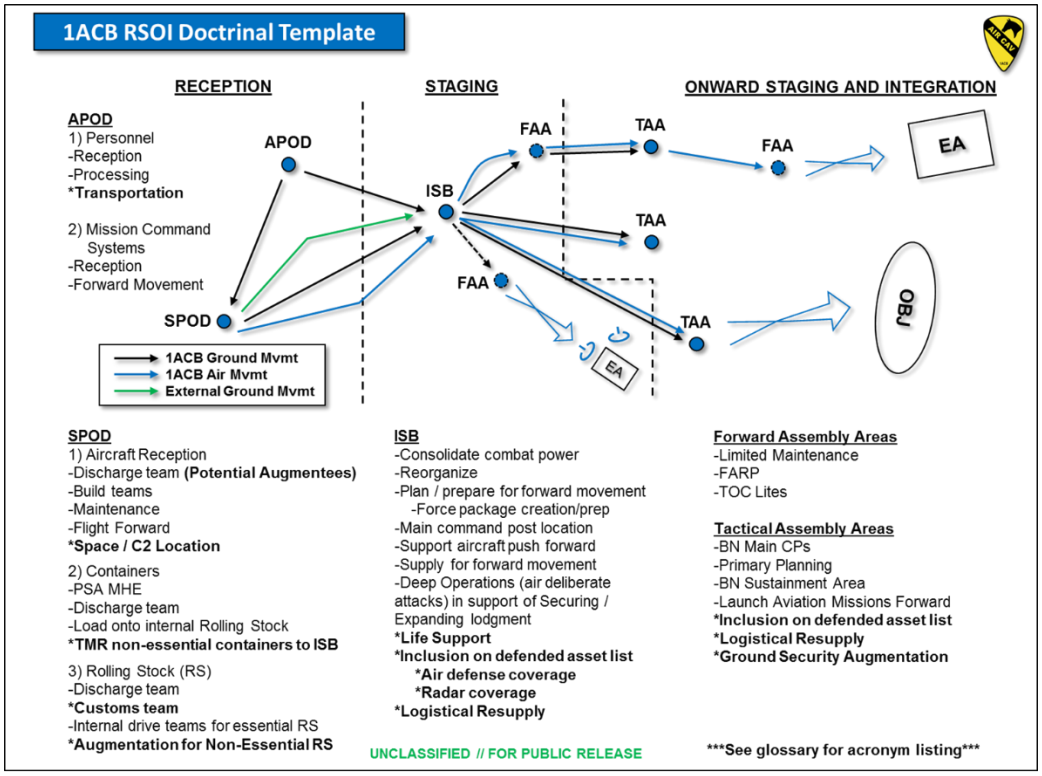


Figure 3: 1st Air Cavalry Brigade planners established a doctrinal template (DOCTEMP) to conceptualize the 1ACB RSOI into Europe

Air Port of Debarkation (APOD)

The primary purpose of the APOD is to provide a space where deploying personnel and select equipment can arrive into theater via strategic air transportation platform. The optimal APOD is located at a civilian or military airport with a runway capable of landing a U.S. C-5 Galaxy aircraft. Personnel and select equipment designated for air transport would move from the APOD to the SPOD and ISB by military or civilian transportation in order to establish mission command and prepare to receive equipment from the SPOD. In addition, the deploying unit must coordinate with host nation security forces, through the U.S. embassy and the ODC. Equipment and personnel moving through the ISB should include:

- Aircraft build and maintenance teams
- Aircraft pilots and crews
- Aviation mission planners
- Mission command equipment and operators
- Vehicle drivers and vehicle commanders

Sea Port of Debarkation (SPOD)

The primary purpose of the SPOD is to receive, download, and stage all aircraft, containers, and rolling stock from a strategic naval transportation vessel. The optimal SPOD to accomplish CAB RSOI tasks would be a port that could accommodate a roll-on/roll-off (RO/RO) vessel. The RO/RO vessel would allow the CAB to avoid removing critical components of aircraft, allowing the CAB to fly aircraft from the port after

completing a less-demanding Maintenance Operational Check (MOC) rather than conducting the time-consuming Maintenance Test Flight (MTF) needed after reassembly of the aircraft.[8] The SPOD would need to have a space to both download and stage all containers and rolling stock for onward movement, but would also require a separate area with at least 400,000 square feet of hazard-free space in order to build, test, and fly aircraft. Previous observations from RAF units deploying to USAREUR stressed the importance of quickly clearing the SPOD, especially considering that in a NATO Article V crisis scenario, additional Army brigade combat teams (BCTs) will likely be flowing into theater using the same port facilities. The mission command element at the SPOD would be responsible for:

- Discharging aircraft, containers, and rolling stock from the vessel
- Aircraft reception and build
- Staging aircraft, container, and rolling stock for onward movement
- Conducting necessary aviation maintenance
- Housing and sustainment requirements for aircraft build and maintenance teams

Intermediate Staging Base (ISB)

The primary purpose of the ISB is to provide a protected space where deploying forces can reassemble, rearm, refuel, and reorganize following disembarking from strategic lift assets. The optimal ISB to accomplish CAB RSOI tasks would be a U.S. or NATO airbase within a 30-minute flight (approximately 60 miles) from the SPOD. This distance would allow the CAB to fly directly from the SPOD to the ISB without refuel, and would limit weather impacts to a localized area for both takeoff and landing. The ISB should have enough ramp space to safely park the entire fleet of CAB aircraft in accordance with Army safety doctrine. The ISB should also have hangar space available, in order to allow technical maintenance without weather impacts. The mission command element at the ISB would be responsible for:

- Consolidating and reorganizing combat power
- Planning and preparing for onward movement and tactical missions
- Maintaining lodging and life support requirements for all pilots and crew members
- Conducting necessary aviation maintenance

Planning Timeline

The 1ACB deployment planning timeline generally spanned from notification in December 2016 to deployment in September 2017. Upon notification, the unit immediately conducted mission analysis to understand the operational environment and the tasks necessary to deploy the brigade to Europe. The 1ACB team developed a collective training strategy to address both the brigade's wartime mission essential task list (METL) tasks, as well as the USAREUR RSOI requirements (see figure 4). The major milestones in the 1ACB collective training strategy included:

- DEC 2016 – Deployment notification
- JAN-FEB 2017 – Mission analysis and designing training plan

- MAR-APR 2017 – Battalion and Brigade warfighting function staff training at the Ft. Hood Mission Command Training Center (MCTC), aviation gunnery tables 3-6, and 7-9
- APR 2017 – Brigade-level command post exercise (CPX) at the Ft. Hood MCTC
- MAY-JUN 2017 – Operation SILVER BAYONET 1 culminating training exercise
- JUL-AUG 2017 – Operation SILVER BAYONET 2 mission command exercise planned and administered by the 1st Cavalry Division
- SEP 2017 – Container, wheeled vehicle, and aircraft movement to SPOE
- 20 OCT 2017 – Begin Operation AIR CAV BLUEHEARTS, ramp down at SPOD
- 22 OCT 2017 – SPOD cleared of aircraft
- 02 NOV 2017 – ISB at Chievres Air Base, Belgium clear of aircraft and personnel
- 10 NOV 2017 – "Ready to Fight" demonstration complete, end Operation AIR CAV BLUEHEARTS

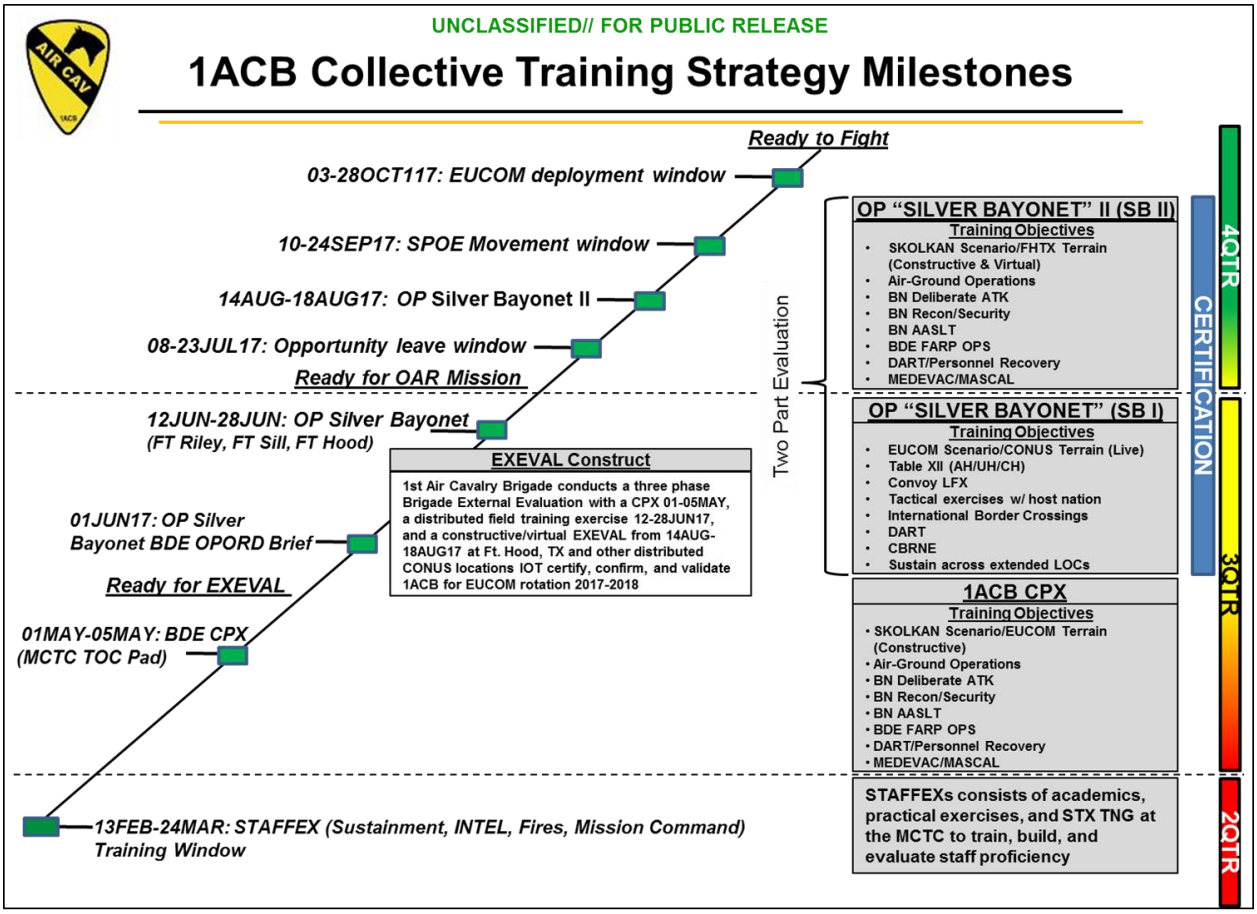


Figure 4: 1st Air Cavalry Brigade planners designed a collective training strategy to prepare the Brigade to conduct both its wartime METL tasks and EUCOM RSOI requirements.

1ACB was fortunate to replace another combat aviation brigade, the 10th CAB from Ft. Drum, New York, as the USAREUR RAF aviation brigade. 10CAB identified

several lessons learned that 1ACB planners considered while designing the brigade's collective training strategy. One lesson learned from the 10CAB deployment was to hand carry army battle command systems (ABCS) with lead elements of the tactical operations center (TOC); this allows the CAB commander to quickly establish mission command for the RSOI operation and communicate needs to higher headquarters and supporting theater sustainment command. Another important lesson learned was to develop local flying procedures and pre-plan air crew mission briefings for onward flights from the SPOD; this allows the CAB to rehearse the movement from the SPOD while stationed CONUS, and facilitate swift staging and onward movement from the SPOD.

Part 4: Pre-deployment phase

SILVER BAYONET 1: Pre-deployment Culminating Training Exercise (CTE)

The 1ACB staff developed an RSOI culminating training exercise (CTE), designated Operation SILVER BAYONET 1, as the primary venue for preparing the brigade for the anticipated RSOI tasks. The framework for the exercise was to create a training environment that would match the geographic footprint of ATLANTIC RESOLVE, address the challenges of multinational integration, and replicate the missions sets 1ACB would accomplish in Europe. Planners devised an AO that encompassed military bases in Texas and nearby states, and included several DoD branches and service components. After considering several bases, 1ACB selected Fort Riley, Kansas; Fort Sill, Oklahoma; Fort Hood, Texas; and Lackland Air Force Base (AFB), Texas. This disposition of units allowed 1ACB to face the unique challenges of distance across all warfighting functions. The overall end state for this exercise was to develop trained and lethal air/ground crews, able to conduct sustainment, mission command, and expeditionary deployment operations across extended distances in a complex, international environment.

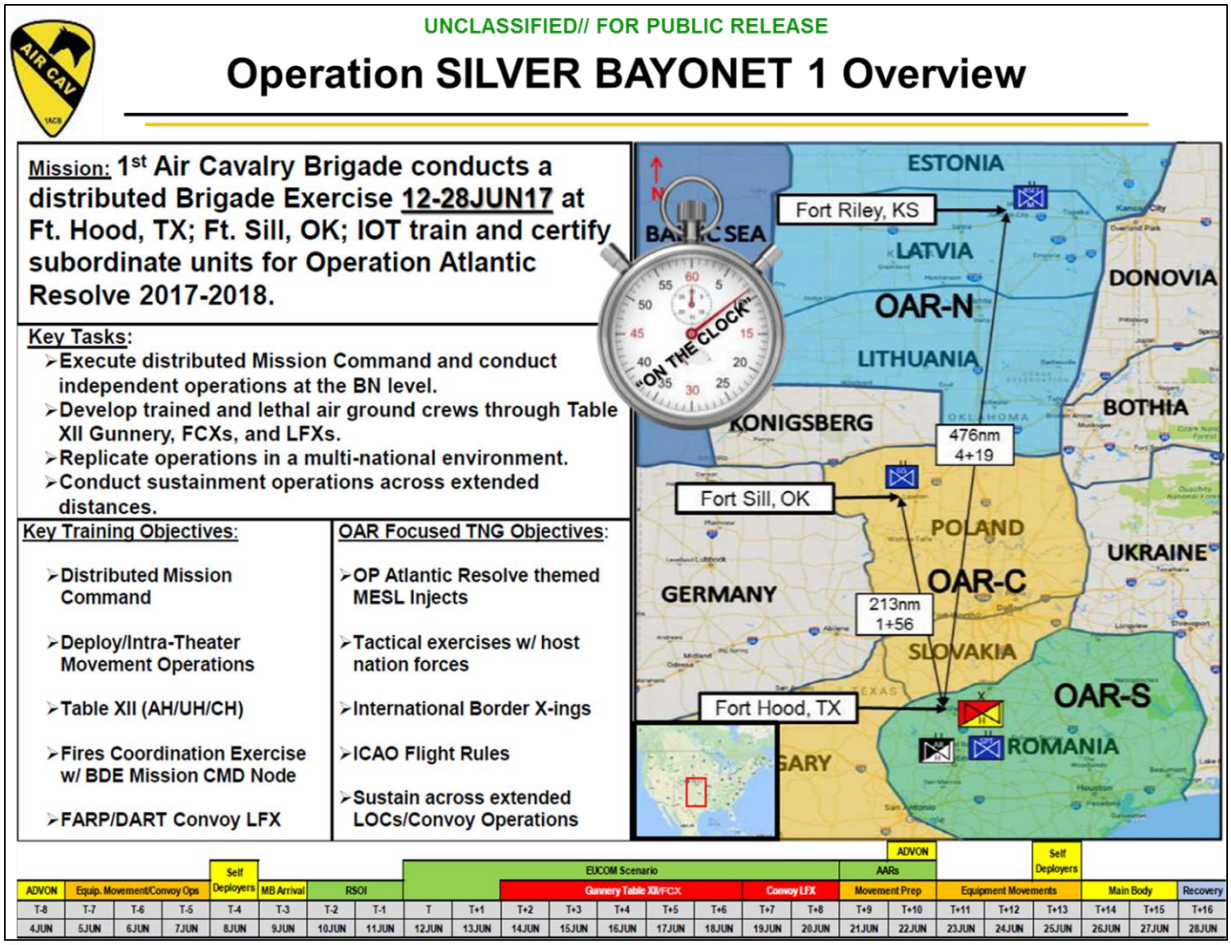


Figure 5: Operation SILVER BAYONET 1 trained 1ACB aviation battalions to conduct anticipated USAREUR RSOI tasks, preparing the brigade for the first 30 days in theater.

SILVER BAYONET 1 lasted from June 1-28, 2017 and allowed 1ACB to validate expeditionary deployment systems and processes. Due to the decentralized nature of the exercise, special consideration throughout mission analysis specifically developed key individual and collective tasks tied to the movement and maneuver, mission command, and sustainment warfighting functions (WFFs). During mission analysis, 1ACB planners used key tasks at the collective and individual level as measures of effectiveness for overall training objectives.

Key tasks included:

- Perform sea port of embarkation activities for deployment (55-CO-4809)
  - Conduct convoy operations
- Operate a mission command network (71-8-5003)
  - Establish the command post node (CPN) with upper and lower tactical internet (TI)
- Perform pre-deployment maintenance activities (43-2-4805)

    - Conduct sustainment and maintenance; push aviation repair parts from the supply support activity (SSA) to forward deployed aviation units
- Conduct expeditionary deployment operations in support of the offense, defense, stability and defense support of civil authorities (DSCA) (55-CO-4830)

Another critical component of SILVER BAYONET 1 included training for aircraft, wheeled vehicle, and container movement. 1ACB units exercised all of the deployment functions and facilities at Ft. Hood. Air cavalry troopers utilized the arrival/departure air control group (A/DACG) to practice loading helicopters and rolling stock aboard strategic air assets. An important aspect of this training included folding and unfolding all five types of Army helicopters in the 1ACB inventory, and preparing them for movement aboard strategic lift assets. Troopers also exercised loading and unloading vehicles at the rail operations center (ROC), and prepared vehicles for line haul at the deployment ready reaction field (DRRF). The brigade was also able to exercise individual skills including hazardous material (HAZMAT) and customs inspections.

SILVER BAYONET 1 was also an excellent opportunity to test the brigade's tactical mission command systems, and build proficiency in communicating with organic secure platforms. Each battalion established a tactical operations center command post (TOC-CP), complete with upper and lower tactical internet, using a command post node (CPN). Each battalion also established a tactical command post (TAC-CP) that maximized joint capabilities release (JCR), FM radio, and tactical satellite (TACSAT) radio systems in order to maintain a smaller electromagnetic footprint while deployed in a field environment. Battalions maintained communication with the brigade command post, exercising the command post of the future (CPOF) army battle command system (ABCS) system as the primary form of communication across the brigade's AO. Exercising the brigade's secure mission command systems would pay dividends during RSOI in Europe.

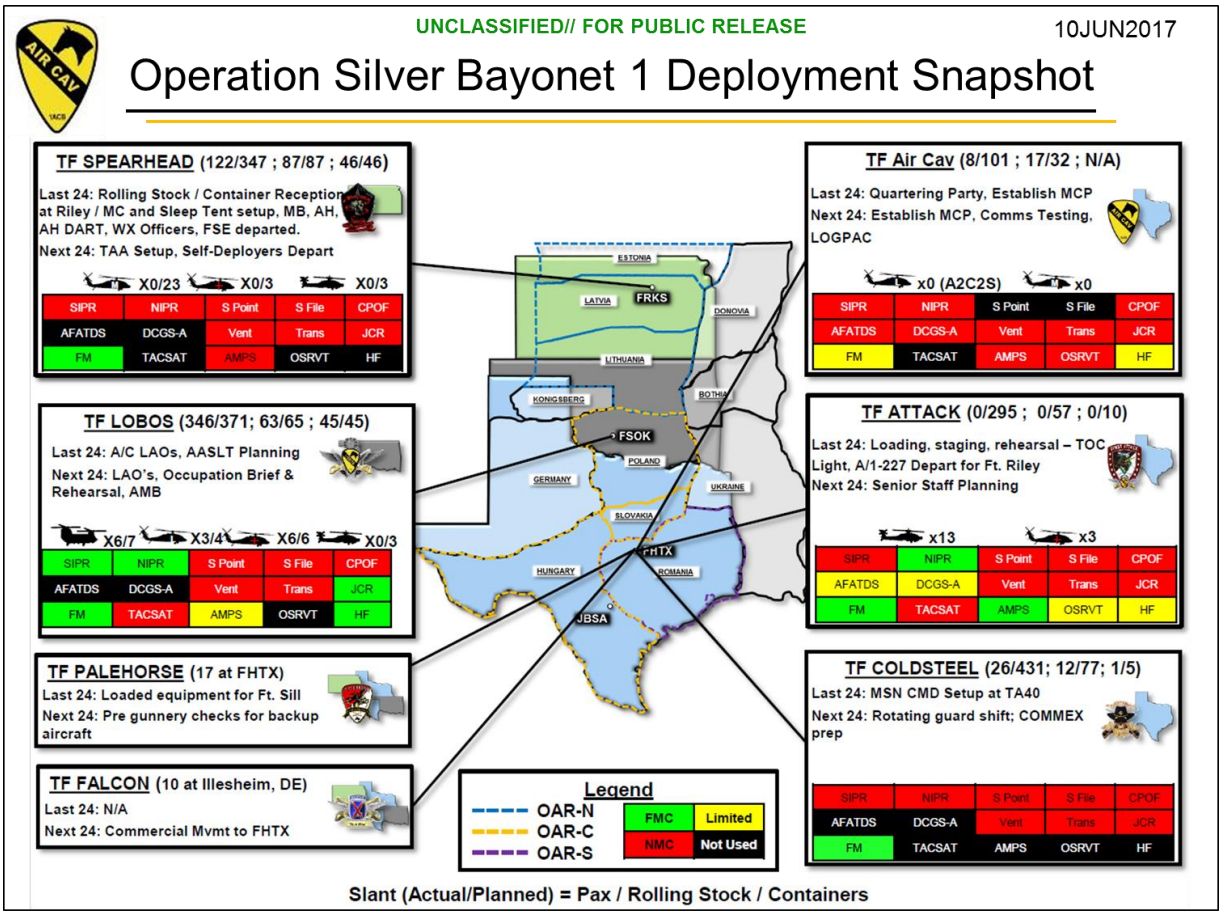


Figure 6: 1st Air Cavalry Brigade planners designed Operation SILVER BAYONET 1 to replicate ATLANTIC RESOLVE geographic distances and USAREUR RSOI requirements

1ACB maximized training with partners from other branches and components of service in order to train aviation battalions on the challenges of conducting operations with multinational partners. Formations across the brigade conducted operations with the U.S. Army active, National Guard and Reserve components; U.S Air Force active and Reserve components; and the U.S. Marine Corps Reserves. Air Cav troopers, from the Soldiers on the battlefield to the brigade commander, had to learn the service-specific languages for tactics, techniques, and procedures. While it is impossible to replicate the challenges of multinational interoperability, this training served to prepare the brigade to operate alongside non-active duty Army formations.

Rather than focusing on a NATO Article V response scenario or an OPLAN-informed crisis response, the brigade focused efforts for SILVER BAYONET 1 on day-to-day operations in Europe. Leaders chose this training model to best replicate ongoing operations in the USAREUR AO. The brigade commander issued guidance to complete aviation gunnery up to Table XII, conduct battalion fire control exercises, and train mission essential tasks expected to be executed in Europe. Battalion staffs then devised training plans to achieve the commander's end state.

Following SILVER BAYONET 1 at the end of the fourth quarter in fiscal year 2017, 1ACB was prepared to meet the USAREUR commander's "Ready to Fight" timeline. In order to ensure that 1ACB would achieve success during RSOI, brigade staff planners developed a deployment loadout plan at the SPOE in Corpus Christi, Texas, which would ensure the brigade was postured and prepared for actions at the SPOD and ISB in Belgium.

The 615th Aviation Support Battalion served as the 1ACB mission command element for deployment operations – "pushing the brigade" out of Fort Hood. The 615 ASB's primary mission was to act as the overall mission command node for moving the brigade through the logistical readiness center (LRC) sites at Fort Hood. 1ACB planned to move 77 aircraft, over 1500 pieces of rolling stock, and over 500 containers from the SPOE via sea transport on the multipurpose support vessel (MSV) Endurance.

Fort-to-Port Planning

The preparation and planning process began with an overview and analysis of each battalion's modified table of organizational equipment (MTOE), compared against the quantity of equipment and personnel on hand. This analysis determined what types of equipment needed to be shipped, helped build a unit deployment list (UDL), and allowed 1ACB movement planners to input deployment data into the Transportation Coordinators' Automated Information for Management System (TC-AIMS). 1ACB planners also considered what types of equipment, such as mission command systems and special maintenance tools, were required in the initial days of the RSOI process. The detailed movement planning, coupled with the special equipment needed at the beginning of RSOI, allowed 1ACB planners to effectively forecast strategic air and sea movement requirements.

In order to effectively leverage the equipment when it first arrived at the SPOD and APOD, 1ACB planners prioritized mission critical personnel to deploy on the initial flights into Europe. The concept directed by the brigade was to have a package of people, parts and tools dedicated to both the SPOE and SPOD in order to prepare aircraft for shipment, and prepare aircraft for flight, respectively. This package was trained together and consolidated with Bravo Company, 615 ASB (B/615 ASB) for the duration of the operation. Though the task was assigned to B/615 ASB, Soldiers from across the brigade were attached to the unit for the mission.

615 ASB was designated as the task force headquarters for the mission at the SPOD. Parts, tools, petroleum, oil, lubricants, and aviation ground equipment were also centralized under B/615 ASB for the operation. Parts were maintained by aircraft mission, design, and series (MDS) to help with maintenance efficiency of distribution. In determining the aviation parts requirements, aviation battalions conducted supply demand analysis for each aircraft MDS and communicated these parts requirements to B/615 ASB Tech Supply in order to ensure that commonly required parts were readily available. In keeping a parts package on hand, the port teams were prepared to

accomplish maintenance on site at both the SPOE and SPOD. This ensured that the brigade was prepared to immediately address maintenance issues at both the SPOE and SPOD. If executed properly, this maintenance plan allowed for faster build rates, and the ability to quickly clear the port and assume a “Ready to Fight” posture at the ISB.

Once the people, parts, and tools were identified for the task, the next step was creating a training plan. Task number 55-CO-4809, perform sea port of embarkation activities for deployment, is the collective task that 1ACB planners chose to help establish performance steps and measures for SPOE deployment activities. This task is fairly simple and straightforward, however many Soldiers in the formation had never prepared an aircraft for shipment. Two different training exercises were developed to build proficiency in the task. The first event occurred during a field training exercise at Lackland AFB, Texas, as a part of SILVER BAYONET 1, where B/615 ASB troopers conducted blade fold/blade unfold exercises. The training task taught lessons in production and efficiency modeling to Soldiers and leaders alike. The training also helped the brigade assess the aircraft build rate, which would allow planners to forecast how quickly the organization could clear the SPOD during RSOI.

The aircraft build rate is dependent on two main principles: familiarity with the task and sequencing of enablers. Both principles were trained in August 2017, approximately one month prior to port operations, when all eight blade fold teams were assembled with one aircraft each per MDS. The teams built repetition in the task, folding and unfolding the aircraft multiple times during the training day. Once repetition created familiarity, leadership involved the rest of the enablers, including quality control technical inspectors, to enforce the proper maintenance write ups and ensure that removed components were placed in the aircraft in a standardized manner. This provided an accurate survey of the time required to perform the task. Once pre-deployment planning was complete across the brigade, 1ACB issued a deployment OPORD and conducted a detailed deployment rehearsal led by the brigade operations officer.

Deploying from Fort-to-Port

The 615 ASB owned the mission command node of monitoring and coordinating the brigade’s movement through the Ft. Hood LRC sites. During the execution rehearsal, each major LRC on Ft. Hood played a key role in inspecting, certifying, and moving 1ACB equipment for movement to the SPOE.

The Deployment Readiness Reaction Field (DRRF) at Fort Hood was the final stop for quality control and assurance that 1ACB vehicles were in the correct configuration and properly labeled for shipping. The DRRF mission command node worked alongside unit movement officers (UMOs) and civilian logisticians to ensure that vehicle weights, applied military shipping labels (MSLs), installed radio frequency identification (RFID) tags, and all unit deployment list (UDL) information was valid with the Surface Deployment and Distribution Command (SDDC). Vehicles staged at the

DRRF were programmed into train carload plans based on priorities of which equipment needed to come off the vessel first upon arrival at the SPOD.

1ACB conducted operations at the (ROC) in a controlled and deliberate manner. The LRC civilian logisticians provide a significant contribution in the realm of expertise, coordination and safety at the ROC. Operations at the ROC are among the most dangerous elements of deployment and movement operations, presenting the highest risk to Soldiers and equipment. The 1ACB provided 40 Soldiers and 20 NCOs to the ROC in order to build and span railcars per LRC and SDDC manning guidelines. Using a proactive safety philosophy, the 1ACB ensured that safety officers and NCOs were present, and that battalion and company command teams were at the ROC, in order to meet the 1ACB commander's intent for Soldier safety.

Port of Embarkation

1ACB was originally scheduled to depart from the Port of Beaumont in Beaumont, Texas, but Hurricane Harvey devastated the Texas coastline in September 2017, two weeks prior to vessel load-out. Three days prior to vessel load-out, SDDC informed Fort Hood movement control officers that 1ACB would conduct port operations at Corpus Christi. Planners from brigade and battalion staff sections conducted a hasty recon of the port shortly before execution. The brigade coordinated for a large parking lot to be used as a landing zone (LZ) and maintenance area, in order to enable 77 aircraft to land and be prepared for shipment. This parking lot allowed for multiple helicopters to land, and taxi forward into maintenance position for blade folding. Once all aircraft were folded, the 1ACB troopers loaded the aircraft into the MSV Endurance for transport to the SPOD at Zeebrugge, Belgium.

When the MSV Endurance arrived at the SPOE, teams were assembled at the pier to tug the aircraft onto the boat, then chain or "lash" the aircraft onto the boat deck. Lashing has traditionally been accomplished by civilian longshoreman or civilian contractors from the theater aviation sustainment manager (TASM), but 1ACB leaders decided to have Air Cav troopers load aircraft in order to build proficiency and maximize manpower during RSOI. There is no Army course or school that exists which teaches lashing, so 1ACB resourced civilian subject matter experts to provide instruction and demonstrate lashing techniques, using a guidebook from SDDC (SDDCTEA PAM 55-21 4th edition).

The teams loaded all 77 aircraft in 18 hours of work over two days. The boat was loaded so that all maintenance and aircraft build team equipment were the last items loaded on the boat. This ensured that, during RSOI at the SPOD, the first equipment to come off the boat would be the port package equipment. Additionally, the aircraft load plan helped 1ACB maximize aircraft build teams during RSOI, and resulted in maximum productivity during aircraft build operations at the SPOD.

SPOD and RSOI Final Planning

In the short time after SPOE load-out and personnel deployment to Europe, the 1ACB plans team worked diligently with senior warrant officers in the aviation battalions

to plan the onward flights from the SPOD to the ISB and TAA at Illesheim, Germany. A major component of this planning was forecasting which aircraft would be built at the port on which day, and ensuring the right pilots and crews would arrive on site in order to clear the SPOD in a timely and deliberate manner (see figure 8).

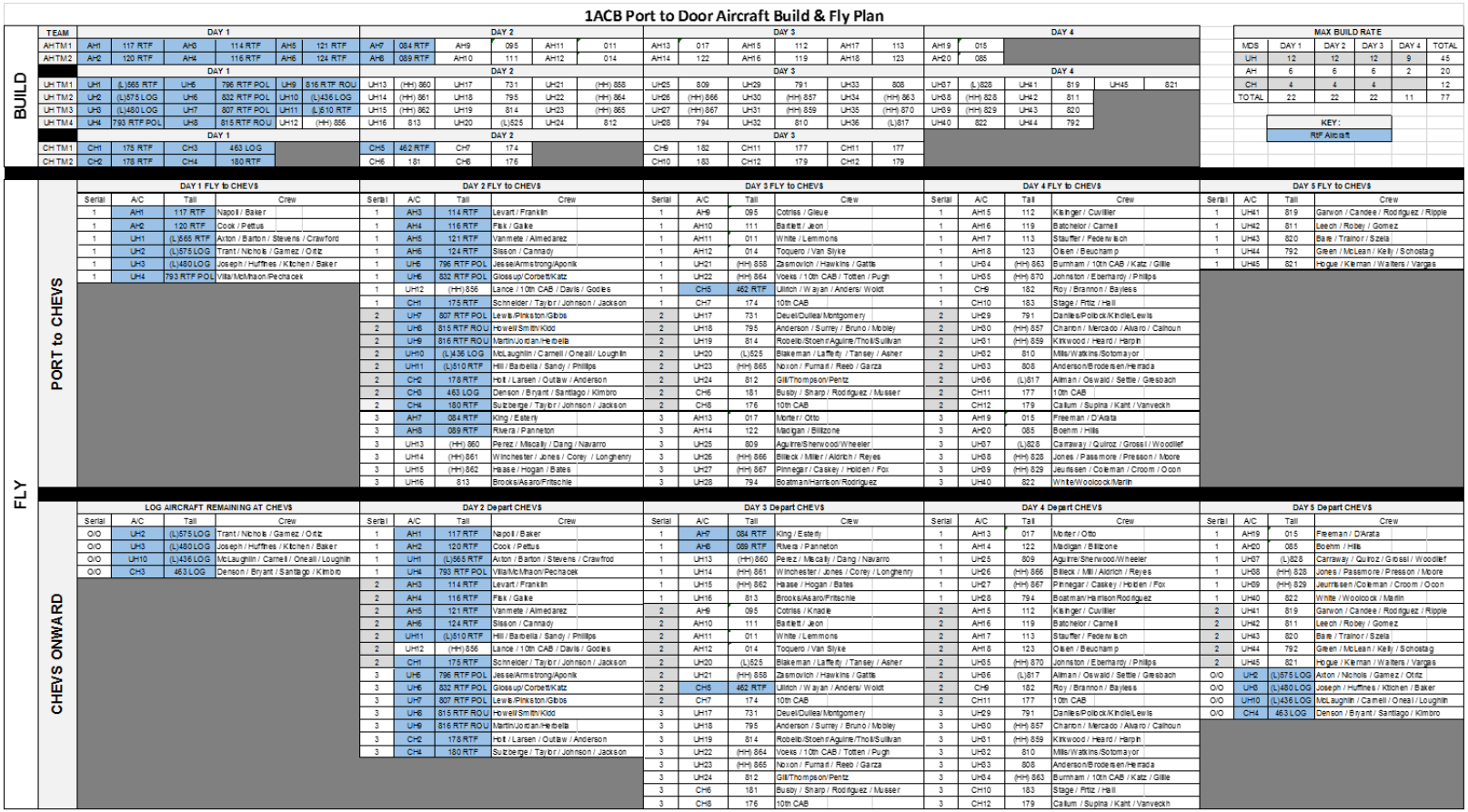


Figure 7: 1st Air CAV Brigade planners developed a detailed aircraft build and fly plan to forecast rate of assembly at the SPOD and effectively move pilots and crews during RSOI.

Aviation planners also made a deliberate effort to plan for USAREUR-specific transportation requirements prior to deploying to Europe. Senior aviators insisted that the brigade conform to the use of the DD Form 1801 Flight Plan prior to departing Fort Hood. This allowed flight crews to become comfortable with the form, which the international community uses to file flight plans. Aviation planners developed the flight route from the SPOD to the ISB and TAA while still at Ft. Hood, giving crews the opportunity to review the routes prior to departing CONUS and allowing 1ACB planners to think through contingencies due to weather and maintenance. The plans team also briefed multiple air mission commanders (AMCs) for each flight, which established a pool of AMCs that could be spread across the flight serials, building flexibility in the event that air crews had to deviate from the planned mission.

USAREUR Deployment Timeline

- Torch Arrival: 03OCT2017
- ADVON Arrival: 10OCT2017
- Main Body1-5 Arrival: 17-27OCT2017
- MSV Endurance Ramp Down at SPOD: 20OCT2017
- Trail Arrival: 02NOV2017

Figure 8: The final 1ACB EUCOM deployment plan called for strategic air flights into three sites in ATLANTIC RESOLVE locations, and one SPOD located at Zeebrugge, Belgium; 1ACB would have 21 days to move all equipment from the SPOD and APODs into the forward assembly areas.

Part 5: RSOI in Europe

The final planning stages for the 1ACB RSOI focused on SPOD and ISB operations in Belgium. In order to meet the USAREUR commander's intent, 1ACB would have 21 days to build combat power at the SPOD, move combat power to forward locations, and demonstrate combat capabilities by conducting training exercises integrated with NATO allies. The 1ACB plan for strategic air movements to APODs was relatively uncomplicated, as strategic air movement platforms (such as C-17 and C-5 cargo aircraft) were able to deliver 1ACB combat power directly into ATLANTIC RESOLVE forward locations in Riga, Latvia; Mihail Kogalniceanu (MK) Airbase, Romania; and Powdiz, Poland. ..

1ACB planned to move 420 total personnel into Belgium in order to conduct RSOI activities at the APOD, SPOD and ISB. The remaining 1300 personnel, who were not a part of the RSOI package in Belgium, flew directly into Germany and the various ATLANTIC RESOLVE locations in order to minimize the sustainment footprint for the RSOI team. The purpose of RSOI operations was to rapidly build combat power at the brigade's initial staging bases (ISBs) within the USAREUR AO. This would demonstrate the 1ACB capability to provide dynamic presence, reassuring allies and partners of the United States' commitment to deterring aggression in Europe. All 1ACB rolling stock and containers would be moved from "port to door" by commercial line haul and Army movement personnel from the 16th Sustainment Brigade (16SB); 1ACB personnel would only need to receive this equipment at the TAAs in Illesheim and Katterbach. Mission command had previously been identified as a major friction point in the 10th CAB RSOI AAR. 1ACB signal planners took care to ensure that mission command would be accomplished using the Army's secure tactical networks and systems.

1ACB utilized the organization's organic secure mission command systems during the RSOI process. Previous RAF deployments to Europe had relied on civilian and unencrypted communications platforms to conduct mission command during RSOI, when Army systems failed. 1ACB utilized strategic air platforms to deliver mission command and army battle command systems (ABCS) at each command post, allowing the brigade to track combat power build and RSOI tasks. In addition, the 1ACB mission command element that deployed to Belgium hand-carried several ABCS systems aboard their international flight, which ensured the brigade was able to quickly establish secure communications with subordinate units and higher headquarters upon arrival into the Europe.

1ACB also prepared to conduct secure mission command during multiple training exercises at Ft. Hood. During SILVER BAYONET 1, nightly update briefs were conducted over CPOF, and subordinate units updated running estimates and trackers on tactical CPOF pasteboards in real time. When tactical ABCS systems failed, the brigade was able to quickly fall back on joint capabilities release (JCR) and analogue

battle tracking procedures to control the aircraft build and fly plan at the SPOD and ISB. Before arriving at the ISB, all Air Cav troopers assigned to the RSOI mission entered Europe through the APOD at Brussels International Airport.

Airport of Debarkation (APOD) – Brussels International Airport, Belgium

1ACB coordinated with the Belgian Government through the U.S. Department of State and the ODC in order to secure host nation security support for the deployment into Europe. The Belgian Government maintains a military terminal at the Brussels Airport, and the facility has been guarded under increased security since the March 2016 terrorist attacks killed 35 people at the airport and across the city. Belgian military and police maintained responsibility for security at the Brussels Airport military terminal, and provided police escorts for contracted bus movement from the APOD to the SPOD and ISB. 1ACB troopers spent only a few hours at the APOD, loading baggage and manifesting through personnel systems before conducting onward movement.

Intermediate Staging Base (ISB) – Chievres Air Base, Belgium

The 1ACB RSOI mission command element was located at Chievres Air Base, a NATO airfield in Belgium that is managed by U. S. Army Garrison Belgium-Netherlands-Luxemburg (USAG BENELUX) and the U.S. Air Force 424 Air Base Squadron. 1ACB planners chose this location as the ISB because it was managed by U.S. and NATO personnel, it had an inactive runway that could safely accommodate parking for all 77 aircraft at the same time, it was located within a 30-minute helicopter flight from the SPOD, and it had suitable space to provide life support and class I requirements for over 300 Air Cav troopers. The Chievres ISB also had aircraft hangars available for 1ACB maintenance personnel to perform any necessary sensitive repairs without weather impacts. The purpose of the ISB was to provide overall mission command of the RSOI operation, and to stage pilots and crews before moving to the SPOD and receiving aircraft.

ISB key tasks included:

- Provide overall mission command for 1ACB RSOI in Belgium
- Conduct final air mission planning and coordination
- Brief flight plan to pilots and crews
- Provide life support to flight crews when at port
- Coordinate transportation of flight crews to SPOD
- Provide bulk class III to aircraft coming from port
- Provide air traffic services and maintenance support to all aircraft

1ACB logisticians and movement personnel established contracts through the 16SB in order to provide billeting and class I support at the ISB. Air Cav troopers at the ISB ate meals from a containerized kitchen (CK), and had access to a Post Exchange and commissary for sundry items. 16SB, the USAG BENELUX garrison command team and the department of public works (DPW) helped maintain heaters, generator

light sets, and latrines to support the ISB. The garrison was also able to provide vehicles from the local transportation motor pool in order to transport pilots, crews and equipment from billeting to the aircraft. Based off the brigade's anticipated aircraft build rate, and given the fact that aircraft pilots and crews were required to spend their first 72 hours in theater acclimating to the new time zone (in accordance with the brigade's standard operating procedures), the ISB was prepared to house and feed up to 300 personnel for at least 10 days.

The 1ACB maintained a mission command element at the ISB, providing oversight for all RSOI operations in Belgium. The mission command element utilized the hand-carried ABCS systems and the Army's Warfighter Information Network – Tactical (WIN-T) to establish tactical, secure mission command within 24 hours of arrival. In order to track build rates and maintenance issues back at the SPOD, the mission command element leveraged the Command Post of the Future (CPOF) command and control software system.

Another critical task at the ISB was to conduct aviation mission planning for the flights from the SPOD to the ISB and TAA. 1ACB established an aviation mission planning cell, which included senior aviators from all subordinate battalions, led by the brigade's senior instructor pilot (SP). Their task was to refine the flight route for onward movements, brief pilots and crews on the plan, stage air mission commanders for movement, and issue updated timelines for departure based on weather and maintenance status. The aviation mission planning cell maintained close communication with the mission command element at the SPOD in order to understand which aircraft by MDS were forecasted to be complete; this drove requirements for crew staging, in order to quickly and effectively clear aircraft from the SPOD.

Staging crews for movement the following day was a continuously refined process. Every evening, the ISB plans cell would communicate the movement schedule for the next 24 hours to pilots and crews; contracted busses would move pilots and crews from the ISB to the SPOD in order to have the crews staged and ready to receive aircraft at the earliest available time, after accounting for weather and illumination data. Weather, illumination and reduced flight abilities during weekends and local holidays restricted flight windows, this forced the Air Cav planners to build flexibility into the plan, in order to exploit potential windows of opportunity for personnel movements.

Sea Port of Debarkation (SPOD) – Zeebrugge, Belgium

USAREUR mobility planners identified Zeebrugge, Belgium as the 1ACB SPOD in August 2017. The Belgian government planned and organized military security at the SPOD, including military working dogs, entry control points, access screening, and a walled-off area that would limit observation of aircraft building and maintenance.

The 1ACB task force operating at the SPOD was the brigade's main effort during RSOI. The SPOD team was responsible for downloading 77 aircraft from the MSV Endurance, and building these aircraft to make them capable of onward movement.

The SPOD team had trained and rehearsed during multiple events, including SILVER BAYONET 1 and SPOE operations at Corpus Christi, Texas. 615 ASB served as the battalion-level mission command element for the SPOD location.

Key tasks at the SPOD included:

- Discharging aircraft, containers and rolling stock from the vessel
- Assembling and unfolding aircraft blades
- Staging aircraft, container and rolling stock for onward movement
- Performing maintenance and pre-flight checks
- Communicating aircraft build status with the brigade mission command element at the ISB
- Housing and sustainment requirements for aircraft build and maintenance teams

The 615 ASB mission command element maintained a team of 107 personnel from across 1ACB. Key functions included aircraft build teams who were responsible for blade unfolding on each type of MDS, maintenance test pilots (MTP) who were responsible for validating that aircraft were certified to fly, and maintenance personnel who were prepared to correct faults on aircraft at the SPOD. The sustainment battalion coordinated with the Belgian government in order to secure lodging at a naval base close to the port, and additional life support requirements were contracted through civilian companies.

Figure 9: 1ACB cleared the Zeebrugge port of all 77 aircraft within 56 hours of the MSV Endurance landing at the SPOD.

Once the boat arrived in Zeebrugge, the aircraft were downloaded to a single pier that had more than 400,000 square feet of unobstructed space to organize, build and fly aircraft from the SPOD. Aircraft were towed into lanes, much like an airfield parking ramp, for ease-of-movement and safety purposes. This allowed teams to work through sections of helicopters in an organized fashion, which became important when the teams worked faster than technical inspectors (TI) could complete inspections. Once a team was done with the preparation, a second team conducted the required pre-flight inspections, and then maintenance test pilots accomplished the ground runs to ensure systems were operational and rotor tracks were in balance. Once the aircraft was cleared by maintenance test pilots, crews were scheduled to fly the aircraft away from port.

RSOI Summary

The 1ACB's detailed pre-deployment analysis, planning, and training set the conditions for the brigade's success during RSOI. The 615 ASB team working at the SPOD effectively downloaded, assembled, and maintained 77 aircraft at the SPOD in under 58 hours. While weather and European weekend flying restrictions slowed the brigade's flights from the ISB, the Air Cav team successfully completed RSOI and all onward movement 14 days after the strategic sea vessel arrived in theater and seven

days ahead of schedule. The brigade met the USAREUR commander's intent, and was postured to reassure allies and deter aggression in the USAREUR AO.

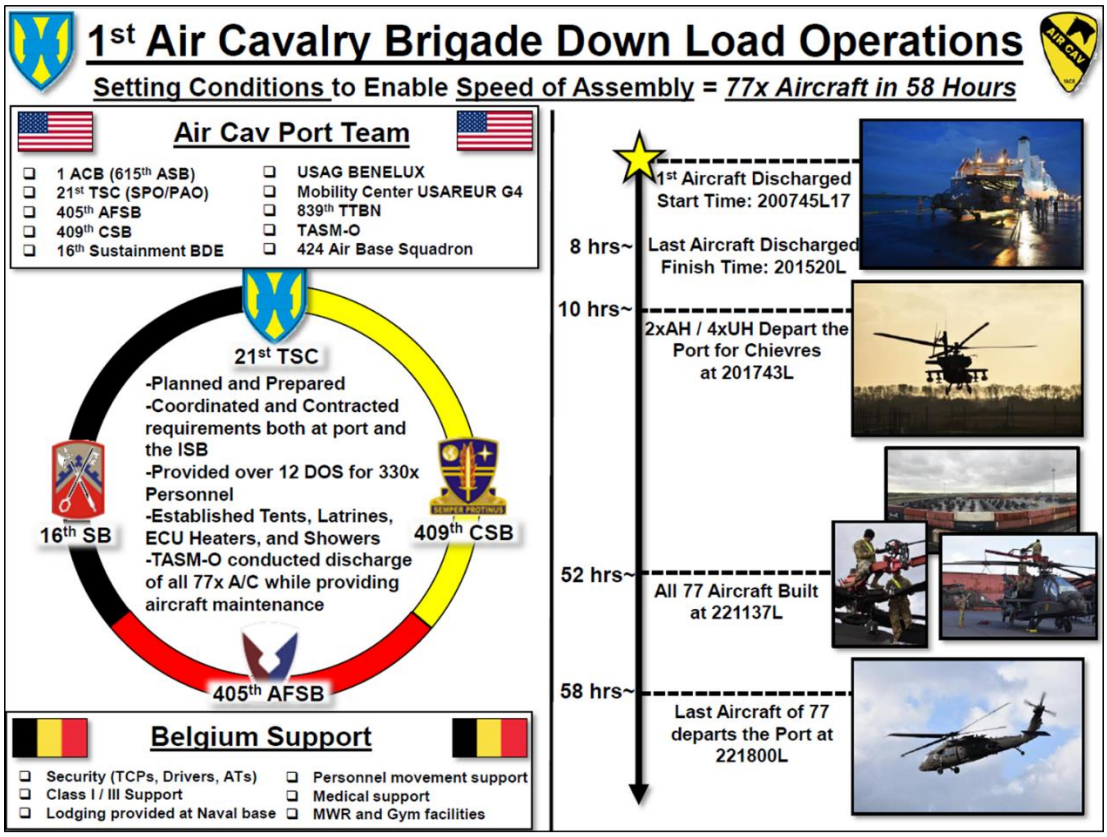


Figure 10: The Air Cav Brigade worked closely with the 21st TSC, 16th SB, USAG BENELUX, and the Belgian Government to accomplish RSOI at the SPOD.

Part 6: Observations, discussion and recommendations

Planning and Preparing for Deployment

Issue: Pre-deployment culminating training exercise

Discussion: Operation SILVER BAYONET 1, the 1ACB pre-deployment culminating training exercise, was the critical building block that trained the brigade to successfully accomplish RSOI tasks during expeditionary operations in Europe. The 1ACB was able to rehearse aircraft blade folding, loading and unloading aircraft and equipment on strategic movement platforms, establishing and maintaining secure communications systems, working with non-Army military organizations, conducting long distance ground convoys, and operating in a task force configuration with all MDS type aircraft. The task force organization also replicated the realities of the operational environment in Europe, and forced subordinate battalions to forecast maintenance and sustainment for all types of aircraft. 1ACB designed and resourced this exercise which addressed individual and collective training tasks and helped prepare the brigade for expeditionary deployment operations in Europe.

Recommendation: Sustain realistic training events that attempt to replicate the anticipated conditions in the operational environment. Train individuals and small units in aviation blade folding and unfolding operations. Incorporate other DoD organizations, including National Guard and Reserve components, to train junior leaders to effectively liaison outside of the organization's organic structure. Incorporate state, local and federal law enforcement organizations, to rehearse coordinating with government organizations for long distance convoy operations.

Issue: Sustainable readiness model and unit training plans

Discussion: The sustainable readiness model requires leaders at all levels to continually evaluate their organizations to ensure that a majority of personnel and leaders are trained on the required training tasks. Ongoing personnel movements cause operational delay between readiness expectations and a unit's true capabilities. Turnover and non-deployable Soldiers will adversely affect a formation's ability to man, shape and supervise deployment operations. Soldiers who are deployable, but are on movement cycle and will not be available for re-deployment or reception in your operating environment will affect a formation's capabilities during RSOI.

Recommendation: Evaluate and forecast personnel manning and training through the pre-deployment and RSOI in order to maintain experience within a formation. Prioritize RSOI training opportunities for Soldiers who will deploy and conduct RSOI activities.

Issue: Aviation mission planning at home station

Discussion: 1ACB aviation planners developed flight plans from the SPOD to the ISB/TAA months in advance of actual execution. This allowed the 1ACB to deploy specific aviation crews in the first main body flights to Europe and ensure that aircraft assembled at the SPOD were quickly moved to the ISB. This also helped the 1ACB forecast cross-border movement requirements, complete the aircraft and personnel automated clearance system (APACS), and modify the flight plan based on weather effects.

Recommendation: Sustain detailed flight planning for the anticipated routes from the SPOD to ISB and TAAs. Continue to develop a build plan, tied to the vessel load plan, so the brigade's mission command element can anticipate when specific aircraft will be available to fly from the SPOD. Tie pilots and crews to specific aircraft tail numbers, so aircraft build lanes at the SPOD are cleared quickly.

Sea Port of Embarkation Pre-Deployment Load-out

Issue: Combat loading the sea lift vessel for speed and efficiency at the SPOD

Discussion: 1ACB was able to accomplish its strategic sea move to Europe using one vessel, the MSV Endurance. The MSV Endurance was designed to accommodate wheeled vehicles that can be driven off the ship under their own power. The 1ACB loaded critical equipment, such as tugs and tools needed to move and assemble each type of aircraft,) last on the vessel. When the MSV Endurance arrived at the SPOD, this critical equipment and prioritized aircraft were the first pieces of equipment off the vessel, allowing aircraft build teams under the direction of 615 ASB to immediately begin assembling aircraft for onward movement from the SPOD.

Recommendation: Sustain loading the strategic sea vessel for efficiency and aircraft speed-of-assembly at the SPOD. Develop load plans to ensure that critical tools and equipment necessary for blade unfolding operations are pre-positioned to be among the first items downloaded at the SPOD.

Issue: Stockpile bench stock to sustain RSOI

Discussion: Before deploying to Europe, 1ACB sustainment and aviation maintenance planners conducted demand analysis in order to pre-order and stock critical maintenance components that would be in high demand during RSOI. Critical components included items such as AC generators, aircraft tires and blade pins. 1ACB aviation maintenance planners pre-positioned these components on containers, so they

would be readily available for aviation build and maintenance teams at the SPOD. 1ACB stockpiled components that would likely be in high demand in the USAREUR AO, including the engine inlet anti-ice valve, and rotor system de-icing equipment that are not generally used in the central Texas climate. This enabled 615 ASB to quickly build and maintain aircraft at the SPOD, allowing the brigade to clear the SPOD of all 77 aircraft within 58 hours of the MSV Endurance arriving at the port.

Recommendation: Aviation units must diligently anticipate all maintenance components and parts to be used during routine operations prior to deployment, in order to effectively build a supply demand analysis and forecast parts requirements during RSOI. Pre-position a 21-day supply of critical components, and stage the stockpile at the SPOD to quickly build and repair aircraft as necessary. Develop a parts load list (PLL), petroleum, oil, and lubricants (POL), and bench stock package to push wherever it is required in theater.

Reception, staging, onward movement and integration in Europe

Issue: ISB Selection

Discussion: The ISB provides a space to house pilots, crews, maintenance personnel and aircraft in order to clear the SPOD of all brigade equipment in a timely manner. The 1ACB ISB was located at Chievres Air Base, Belgium, a NATO airfield operated by the U.S. Air Force with contracted guards to meet all physical security requirements. The ISB Chievres was located approximately 60 miles from the SPOD. 1ACB pilots and crews staged at the ISB, were bussed to the SPOD, and then conducted a 30-minute flight back to the ISB, effectively clearing the SPOD of all aircraft and crews 58 hours after the vessel arrived at the port.

Recommendation: Establish the ISB at a U.S. or NATO controlled airfield that can meet the necessary physical security requirements, and provide appropriate life support for all pilots, crews, and maintenance personnel. Select an ISB that is no more than 60 miles (approximately a 30-minute flight) from the SPOD, allowing the brigade to efficiently move pilots and crews between the ISB and the SPOD by both ground and air transportation.

Issue: Flight operations planning cell

Discussion: 1ACB planners and battalion senior pilots worked diligently in the weeks before deployment to develop a detailed plan to marry the aircraft built at port with the appropriate crew members needed to fly those aircraft. The planning helped drive the personnel manifest for the first main body flight into Belgium, APACS requests for cross-border coordination, and ensured that the appropriate crews who were tasked with the initial “Ready to Fight” demonstration were staged for onward movement. Because all types of aircraft were represented in RTF, the plan provided a ready pool of pilots who were briefed on the flight from the SPOD to the ISB. 1ACB then placed a robust flight planning cell at the ISB, which included the brigade standardization

instructor pilot (SP), air mission safety officer (AMSO), and safety officer. This cell was augmented with mission planning officers from subordinate aviation battalions. At the ISB, this team was able to adjust the air mission planning operations due to changes in weather, timeline, and maintenance status at the SPOD. They also conducted air mission briefs for aviation mission commanders before initiating movement. The planning team was able to adjust movement instructions, moving pilots and crews at the optimal time without extending their duty days, thereby avoiding additional risk.

Recommendation: Maintain a robust flight operations planning cell at the ISB in order to coordinate for onward movement from the SPOD. This team should include the same personnel who constructed the initial air mission plan at home station, in order to maintain continuity with the planning effort.

Issue: Task organizing maintenance and aircraft build teams for aviation task forces

Discussion: In order to meet the USAREUR commander's intent and requirements for ATLANTIC RESOLVE, 1ACB planners deployed company-sized aviation task forces to sites in Poland, Latvia, and Romania in support of ATLANTIC RESOLVE. Because these task forces included multiple types of MDS aircraft, each element required portions of additional maintenance and MDS personnel attached TACON, or OPCON, depending on their mission. For example, an ASB task force maintenance HQ can support every MDS; however, a general support aviation battalion (GSAB) task force HQ cannot support AH-64E model aircraft, thus they will require augmentation from the organic flight battalion, or a slice from the ASB in order to conduct maintenance.

Recommendation: Evaluate the maintenance capabilities needed to support all types of MDS aircraft when an organization is broken into multiple task forces. Make sure that the ASB has pre-positioned the appropriate maintenance equipment and personnel at both the ISB and the SPOD during RSOI.

Issue: Port-to-door line haul operations

Discussion: 1ACB worked through 21st Theater Sustainment Command (TSC) to coordinate transportation movement requests (TMRs) for all rolling stock and container movements from the SPOD to the TAA. The 1ACB plan anticipated having mission command systems arrive at the ISB via strategic air, but these flights were delayed and did not arrive until 48 hours after ramp down at the SPOD. This resulted in limited secure mission command systems available at the ISB for the initial portion of RSOI.

Recommendation: Plan to drive and tactically road march TAC vehicles and containers from SPOD to ISB; this will ensure that mission command systems and equipment are available to battle track RSOI activities.

Part 8: Glossary

ABCS:	Army battle command systems
ACB:	Air cavalry brigade
A/DACG:	Arrival/departure air control group
AFB:	Air Force Base
AMC:	Air mission commander
AMSO:	Aviation mission survivability officer
AOR:	Area of responsibility
AP3:	Army power projection platform
APACS:	Aircraft and Personnel Automated Clearance System
APOD:	Airport of debarkation
ASB:	Aviation support battalion
BCT:	Brigade combat team
CAB:	Combat aviation brigade
COCOM:	Combatant command
CONUS:	Continental United States
CPOF:	Command post of the future
CPN:	Command post node
CPX:	Command post exercise
CTE:	Culminating training exercise
DDC:	Department of public works
DoD:	Department of defense
DRRF:	Deployment ready reaction field
FARP:	Forward arming and refueling point
GSAB:	General support aviation battalion
HAZMAT:	Hazardous materials
IADS:	Integrated air defense system
IETM:	Interactive electronic technical manual
ISB:	Intermediate staging base
JCR:	Joint capabilities release
LRC:	Logistical readiness center
MCTC:	Mission command training center
MDMP:	Military decision making process
MDS:	Mission design series

METL:	Mission essential task list
MOC:	Maintenance operational check
MSV:	Multipurpose support vessel
MTF:	Maintenance test flight
MTOE:	Modified table of organization equipment
MTP:	Maintenance test pilot
NATO:	North Atlantic Treaty Organization
ODC:	Office of defense cooperation
OE:	Operational environment
PLL:	Parts load list
POL:	Petroleum, oil, lubricants
RAF:	Regionally aligned forces
REFORGER:	Return of forces to Germany
ROC:	Rail operations center
RSOI:	Reception, staging, onward movement, and integration
RTF:	Ready to fight
SDDC:	Surface Deployment Distribution Command
SP:	Senior instructor pilot
SPOD:	Sea port of debarkation
SPOE:	Sea port of embarkation
SSA:	Supply support activity
TAA:	Tactical assembly area
TACSAT:	Tactical satellite radio
TASM:	Theater aviation sustainment manager
TC-AIMS:	Transportation Coordinators' Automated Information for Management System
TMR:	Transportation movement request
TOC-CP:	Tactical operations center command post
TPFDD:	Time phased force deployment data
TSC:	Theater sustainment command
USAREUR:	U.S. Army Europe
WFF:	Warfighting function
WIN-T:	Warfighter Information Network-Tactical
UDL:	Unit deployment list

ULO:	Unified land operations
UMO:	Unit movement officer
USAG BENELUX:	United States Army Garrison Belgium, Netherlands, Luxemburg
USAREUR:	United States Army Europe
USEUCOM:	United States European Command

Part 8: Acknowledgements

MAJ Benjiman Smith is a military intelligence officer assigned as the 1ACB S2. He served as the 1ACB's mission command OIC during operations at the SPOE and during RSOI throughout all brigade locations in Belgium.

MAJ Anthony Marston is an aviation officer assigned as the 1ACB S3. He was responsible for all of the brigade's pre-deployment training planning, and oversaw the brigade's mission command at the TAA in Germany.

CPT Alex McHale is an aviation maintenance officer and was assigned as the 615 ASB S3 during operations at the SPOE and SPOD.

MAJ Mitchell Sanik is the B/615 ASB Commander, and was responsible for mission command of the aircraft build teams at both the SPOE and SPOD.

CW5 Steve Napoli is the 1ACB standardization instructor pilot, and served as the brigade's lead aviation mission planner at the ISB.

End Notes

[1] Army Regulation 525-93, *Army Deployment and Redeployment* (Washington D.C.), Chapter 1-6.d. 12 November, 2014. http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/r525_93.pdf
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