

AIR FORCE DOCTRINE PUBLICATION 3-36

AIR MOBILITY OPERATIONS



U.S. AIR FORCE

24 June 2024

Air Force Doctrine Publication 3-36, *Air Mobility Operations*

Table of Contents

Chapter 1: INTRODUCTION TO AIR MOBILITY	1
THE AIRMAN'S PERSPECTIVE ON AIR MOBILITY OPERATIONS	1
MOBILITY AIR FORCES	5
GLOBAL MOBILITY ENTERPRISE	7
Chapter 2: AIR MOBILITY CORE FUNCTIONS	8
AIRLIFT	9
AIR REFUELING	15
AEROMEDICAL EVACUATION.....	19
AIR MOBILITY SUPPORT AND CONTINGENCY RESPONSE	23
Chapter 3: COMMANDING MOBILITY AIR FORCES	31
Chapter 4: PLANNING	40
FUNCTIONAL PLANNING CONSIDERATIONS.....	40
GENERAL PLANNING CONSIDERATIONS.....	43
Appendix A: AIRLIFT MISSION TYPES	51
Appendix B: 618TH AIR OPERATIONS CENTER ORGANIZATION	55
Appendix C: SUPPORT, CONTINGENCY RESPONSE, AND AEROMEDICAL EVACUATION ELEMENTS	57
References	62

CHAPTER 1: INTRODUCTION TO AIR MOBILITY

Air mobility is the rapid movement of resources to, from, or within, a theater by air. It constitutes one element of the strategic mobility triad that includes strategic airlift, strategic sealift, and pre-positioned stocks (PREPO). Together, these elements provide the air, sea, and land infrastructure of the Defense Transportation System (DTS) that supports the Department of Defense's (DoD's) transportation capability for the joint force.

Air mobility operations are categorized as either **intertheater**—operations between two or more geographic areas of responsibility (AORs), or **intratheater**—operations exclusively within one AOR. Effective integration and synchronization of intertheater and intratheater air mobility operations is crucial to positioning joint forces to a position of advantage over an enemy, adversary, or in support of joint objectives.

THE AIRMAN'S PERSPECTIVE ON AIR MOBILITY OPERATIONS



"[Mobility Air Forces] are the most relied upon force in the history of warfare... my force needs to know, and the forces we are supporting need to know, that their success, our success, depends on Air Mobility Command being able to put everybody into positions of advantage."

-- **General Mike Minihan, Commander, Air Mobility Command**
Doctrine Podcast: Lessons Learned in Doctrine

Air mobility operations are an extension of airpower—the ability to project military power through control and exploitation in, from, and through the air. Air mobility contributes to airpower by creating effects at all levels of warfare and breaking down geographical boundaries to apply force rapidly against many facets of an adversary's sources of power. Air mobility's impact is best understood by connecting the air mobility core functions to the United States Air Force (USAF) functions, joint functions, principles of joint operations, and tenets of airpower.

RAPID GLOBAL MOBILITY

The DoD requires the USAF to provide the function of rapid global mobility to employ and sustain military forces that enable joint force commanders (JFCs) to conduct decisive operations across the competition continuum.¹ **To fulfill the rapid global mobility function, air mobility operations are classified into four core functions: airlift, air refueling (AR), aeromedical evacuation (AE), and air mobility support.** These functions, and their associated capabilities and activities, provide rapid global mobility that supports all the joint functions, but especially the functions of command and control (C2), movement and maneuver, and sustainment.

¹ For additional information on USAF functions, see DoDD 5100.01, *Functions of the Department of Defense and Its Major Components*. For additional information on the competition continuum, see Joint Publication (JP) 3-0, *Joint Campaigns and Operations*.

Operation ALLIES REFUGE

Over 17 days, at the end of August 2021, nearly 800 civilian and military aircraft from more than 30 nations safely evacuated thousands of people from Afghanistan through Hamid Karzai International Airport (HKIA) in Kabul. The airlift spanned nine countries, eight time zones, and more than 10 temporary safe havens. Operation ALLIES REFUGE (OAR) became the largest non-combatant evacuation airlift in U.S. history.

More than 250 USAF mobility aircraft contributed to the airlift, including all platforms of the airlift and air refueling fleet. Additionally, nearly 100 contingency response Airmen ran airfield operations at HKIA. They unloaded, repaired, and loaded 721 of the 778 aircraft that transited HKIA, servicing an average of four aircraft simultaneously around the clock. They also provided critical air mobility support by repairing radars, airfield lighting, refueling capabilities, ground servicing equipment, and vehicles to ensure HKIA could handle the influx of traffic. Furthermore, aeromedical evacuation personnel provided unprecedented critical medical care while en route to primary evacuation locations. Medical crews conducted multiple life-saving resuscitations and delivered three babies while airborne.

Overall, OAR required all the air mobility core functions at a speed and scale never encountered before. Airlift, air refueling, aeromedical evacuation, and air mobility support were instrumental to the rapid evacuation of more than 124,000 people.

-- “One year later, historic Afghan airlift inspires pride and reflection across the Air Force”

Airlift. Airlift is the movement of personnel and materiel via mobility air forces (MAF) to support strategic, operational, and tactical objectives. Airlift provides rapid, flexible, and secure transportation for the joint force. Personnel and cargo, categorized as requirements, are transported to meet the JFC’s objectives and priorities.

Air Refueling. AR is the in-flight transfer of fuel from a tanker aircraft to a receiver aircraft in support of strategic, operational, and tactical objectives. AR expands options available to commanders by increasing the range, payload, persistence, and flexibility of joint and coalition receiver aircraft.

Aeromedical Evacuation. AE is the movement of patients under medical supervision to and between medical treatment facilities by air transportation.² AE provides time-sensitive, in-flight care of patients or casualties to and between levels of care, predominantly using mobility aircraft or contracted aircraft (civilian air ambulance) with trained medical aircrew onboard.

² For additional information on AE, see JP 4-02, *Joint Health Services* and AFDP 4-02, *Health Services*.

Air Mobility Support. Air mobility support consists of the C2, aerial port, maintenance, and ground support capabilities for MAF operating around the world. Air mobility support is provided through the Global Air Mobility Support System (GAMSS). GAMSS consists of a limited number of permanent en route support locations, plus ready deployable forces that augment existing locations or establish new locations.

JOINT FUNCTIONS

Command and Control. C2 is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Rapid global mobility contributes to the C2 function through C2 elements operating within a unique Service C2 system. In this context, GAMSS forces may often serve as the initial C2 elements for deploying forces. Furthermore, as mobility aircraft move and maneuver forces, they enable rapid and scalable growth of the overall C2 system.

Movement and Maneuver. Movement and maneuver is the disposition of forces to conduct operations by securing positional or informational advantages. Movement is deploying forces or capabilities into an operating area and relocating them within an operating area without an expectation of contact with the enemy. Maneuver is the employment of forces for offensive and defensive purposes while in, or expecting, contact with the enemy.

Rapid global mobility uniquely contributes to movement and maneuver. Air mobility enhances combat power and flexibility, either by extending their range or providing them with greater maneuverability. Airlift enhances the deployment of critical early entry force packages over strategic distances without the delays caused by terrain or obstacles. AR extends the range and expedites the arrival of self-deploying aircraft, precluding the need for intermediate staging bases. **These capabilities enable the joint force to gain operational reach and positional advantage.**

Sustainment. Sustainment is the provision of logistics and personnel services support to maintain operations through mission accomplishment and redeployment of the force. Air mobility capabilities are generally used for either routine or combat sustainment operations.

Routine sustainment operations involve the movement of materiel and personnel to reinforce or resupply forces already deployed or missions to support organizations involved in humanitarian relief operations. These operations are an effective and efficient use of mobility resources. Air mobility usually employs channel airlift missions to enable routine sustainment.

Combat sustainment operations move supplies, materiel, and personnel to reinforce or resupply units already engaged in combat. Examples of combat sustainment operations include airland or airdrop delivery to combat zones.

PRINCIPLES OF JOINT OPERATIONS AND TENETS OF AIRPOWER

Five principles of joint operations—mass, maneuver, economy of force, security, and surprise—guide the application of airpower through air mobility operations. Additionally,

the airpower tenets of mission command, flexibility and versatility, synergistic effects, concentration, and priority have a direct impact on air mobility operations. Combined with the effort of civilian air transportation partners and the total force integration of Regular and Air Reserve Component (ARC) forces, these principles and tenets help translate the air mobility functions into successful operational concepts that exploit and enhance the airpower attributes of speed, range, and flexibility to create the desired effects that achieve operational objectives.

Mass. Air mobility concentrates the effects of combat power, both direct and indirect, at the most advantageous place and time. Air mobility operations deliver the joint force precisely where and when they are needed, thereby increasing the mass and concentration of military power. Mass is often obtained through AR which increases the range, payload, and persistence of receiving aircraft. It is a force multiplier that significantly expands the available combat power.

Maneuver. Air mobility enables joint force maneuver. Robust air mobility operations keep adversaries off balance by rapidly repositioning forces, thereby allowing the joint force to leverage its maneuver advantage. Air mobility is also the key to exploiting successes and preserving freedom of action by rapidly adjusting lines of communication. Furthermore, AR enables maneuver by quickly shifting combat power to counter emerging threats by exploiting weaknesses and maximizing opportunities.

Agile Combat Employment

An example of operational maneuver is the Agile Combat Employment (ACE) concept. ACE is a proactive and reactive scheme of maneuver executed within threat timelines to increase survivability while generating airpower. ACE positions USAF forces to observe, orient, decide, and act in concert across all domains.

Air mobility is a critical enabler for ACE. MAF move and maneuver forces to predetermined, dispersed locations, and flow forces back to enduring locations. The maneuver of forces between enduring and contingency locations is intended to enhance mission-generation efficiency, increase survivability, and simplify sustainment. Ultimately, the speed, range, and flexibility of MAF can provide meaningful maneuver for the air component and the entire joint force in contested, degraded, or operationally limited environments.

For more information on ACE, see AFDN 1-21, *Agile Combat Employment*.

Economy of Force. MAFs are high-demand and low-density assets that commanders should allocate to expend the maximum possible combat power on primary effects. While the inherent flexibility of air mobility forces creates the ability to conduct efficient operations, effectiveness should not be sacrificed for the sake of efficiency. Air mobility operations have a global impact. Therefore, the preferred command relationship for intertheater MAFs is for United States Transportation Command (USTRANSCOM) to support combatant commanders (CCDRs) with defined AORs. However, under certain circumstances, the C2 of air mobility aircraft performing multi-role missions on the same

sortie should be vested in one authority, normally the theater commander of Air Force forces.

Security. Air mobility prevents the enemy from acquiring an unexpected advantage by moving forces outside the enemy's reach while enabling a long-range strike.

Surprise. Air mobility operations enable forces to reach destinations quickly, thereby opening opportunities for the joint force to seize the initiative via speed and surprise and maximize rapid follow-on sustainment operations.

Mission Command. Mission command is the USAF's approach to C2 that empowers subordinate decision-making for flexibility, initiative, and responsiveness in the accomplishment of the operational mission. Air mobility operations should be executed within the framework of Centralized Command—Distributed Control—Decentralized Execution to maximize the effectiveness of airpower and operate inside the enemy's decision cycle.³

Flexibility and Versatility. The flexibility and versatility of air mobility enables a JFC to simultaneously exploit mass, maneuver, and surprise (flexibility), thereby influencing effects at the strategic, operational, or tactical levels of warfare (versatility). For example, a single MAF asset may have the capability to quickly move forces to mass effects, evacuate wounded personnel to retain friendly advantages, airdrop supplies to enable rapid maneuver, support C2 in execution through tactical battle management, and contribute to operational fires with palletized delivery systems.

Synergistic Effects. Air mobility forces, when properly coordinated with other military and civilian activities, produce effects that exceed the contributions of individual forces. The synergistic application of air mobility and combat forces can dictate the tempo and direction of the operational or strategic effort. Every air mobility operation requires the effective integration of intertheater airlift, intratheater airlift, and the prepositioning of air mobility support forces before combat force deployment.

Concentration. Concentration allows the joint force to maximize air mobility effects while, at the same time, reducing their risk exposure. Air mobility operations that properly support combat operations are the key to employing overwhelming airpower at the right place and time.

Priority. Prioritization of airlift and AR requirements ensures effective use of limited air mobility forces. Air mobility operations support multiple competing common-user requirements (DoD and non-DoD). Therefore, air mobility operations should prioritize and apportion limited mobility resources under the centralized command of their appropriate functional or theater C2 agency.

MOBILITY AIR FORCES

DoD and non-DoD entities rely on MAF to provide resilient and scalable air mobility capabilities that can rapidly move personnel and resources. MAF are AR, airlift, AE, and air mobility support forces drawn from the Regular Air Force, the ARC, and commercial

³ For more information on mission command, see AFDP 1-1, *Mission Command*.

augmentation to provide the USAF's rapid global mobility function. In crisis response, these forces secure national interests by delivering the military power necessary to achieve national and CCDR objectives. They also support non-military entities (e.g., Federal Emergency Management Agency [FEMA] or US Agency for International Development) to deliver aid and humanitarian assistance. MAF also includes specially modified executive airlift (EA) aircraft that support the movement of national leadership, DoD-approved senior officials, and foreign dignitaries.

Regular Air Force forces comprise approximately half of MAF and typically provide the initial response to support contingency operations. **ARC forces** comprise the remaining half of MAF and provide operational capabilities and strategic depth to meet US defense requirements. ARC forces are employed to take advantage of military opportunities, leverage experienced personnel, cover shortfalls in regular component critical skills, and support short-duration national priorities. During crises, volunteers and mobilized ARC units augment regular airlift, AR, air mobility support, and AE forces. When air mobility requirements exceed Regular force capability and ARC volunteerism, the Secretary of Defense (SecDef) may direct ARC mobilization.

Civil Reserve Air Fleet. Air mobility relies on contracted airlift options to meet the requirements of the joint force. The Civil Air Reserve Fleet (CRAF) and commercial augmentation provide flexible airlift options for requirements that do not require special military handling, security, or possess physical characteristics that necessitate movement by military aircraft.

When activated, the CRAF represents a significant portion of the overall airlift capacity available to Air Mobility Command (AMC). Aircraft from US airlines, contractually committed to CRAF, may support DoD airlift requirements during contingency operations or national emergencies when the need for airlift exceeds military capacity. CRAF aircraft augment DoD's organic airlift capacity; they are not a replacement for military assets, nor will they be tasked to assume the same level of operational risk. They will only fly into areas determined to be within acceptable risk (low) and will not operate in a chemical, biological, radiological, or nuclear (CBRN) environment.⁴

There are three stages for CRAF activation. The stages are tiered by order of magnitude and each stage can be tailored to meet specific AMC needs. Stage I is for regional crises, Stage II is for major theater wars, and Stage III is for national mobilization. With SecDef approval, the Commander of USTRANSCOM (CDRUSTRANSCOM) is the activation authority for CRAF. During a crisis, if the commander, AMC (COMAMC) needs additional aircraft, they request that CDRUSTRANSCOM activate the appropriate CRAF stage.

Additional Contracted Capabilities. USTRANSCOM and AMC use commercial augmentation daily to move passengers and cargo via standardized freight tenders. Missions are contracted through USTRANSCOM, executed autonomously by the contracted carrier, and monitored by the 618th Air Operations Center (AOC). Commercial augmentation can prevent a drastic, disruptive, and costly CRAF activation. Instead, AMC contracts tenders (CRAF participating air carriers) to carry cargo internally or via subcontractors, also known as CRAF Prime. Tender companies organically coordinate

⁴ For additional information on the CRAF, see Air Mobility Command Instruction (AMCI) 10-402, *Civil Reserve Air Fleet*.

their beddown and support. Unlike military aircraft, commercial contractors do not require extensive diplomatic clearance procedures. Therefore, they typically enjoy faster overflight clearance processing. Overall, commercial augmentation lowers the total military airlift footprint in the theater. Contract advantages include less-than-full planeload movement flexibility, low overall cost, and swift redeployment, while simultaneously providing economic development in line with national airlift policy. The disadvantages are that commercial augmentation may be difficult or impossible in a contested environment.

GLOBAL MOBILITY ENTERPRISE

Air mobility operations are enabled by the combination of integrated personnel, equipment, infrastructure, and C2 capabilities into what is known as the global mobility enterprise (GME). The GME supports the DTS by providing air mobility in support of all CDRs with assigned and attached air mobility forces. GME executes DTS movements of DoD and non-DoD common-user requirements, and operational support airlift (OSA) requirements.

Global Mobility Enterprise Adjustment

On 16 April 2010, Iceland's Eyjafjallajökull volcano erupted, spewing an ash cloud that closed much of Europe's airspace and severely disrupted the airways connecting North America and Europe. In response, nearly 400 airlift, tanker, and AE missions controlled by the 618 AOC were rerouted to ensure the continued delivery of humanitarian aid, mine-resistant vehicles, warfighters, and aeromedical equipment to support surge operations in Afghanistan and Iraq. In the first days of the eruption, the GME diverted its northern European destinations further south and mitigated the extra distance with AR. Airmen and equipment were moved from the en route structures at Ramstein and Spangdahlem Air Bases to staging locations in Spain. When the volcano sent more ash towards the southern Europe routes, the mobility enterprise flexed again and diverted the cargo flow westward through mobility units in the Pacific. In the end, the GME rerouted over 600 missions, moved over 17,000 tons of supplies, and over 47,000 people.

When contingencies arise, mobility planners identify key nodes and resources to support common-user movement and requirements. Airmen should be positioned quickly to ensure the success of transportation flow throughout the system. Mobility planners ensure each node has the right resources to support the DTS customer. This may include adjusting the nodes and mobility resources to enhance the GME's effectiveness and efficiency. In dynamic or contested environments, the GME requires global situational awareness through collaboration, coordinated operations, and adherence to processes that accomplish CDR's objectives. The GME should be able to operate in contested, degraded, or operationally limited environments and planning efforts should assume a loss or degradation of the GME's C2 capability.

CHAPTER 2: AIR MOBILITY CORE FUNCTIONS

The core functions of airlift, AR, AE, and air mobility support are groupings of unique capabilities and activities that contribute to the overall USAF function of rapid global mobility.⁵ The air mobility core functions also support and enable other USAF capabilities such as counterair, strategic attack, and nuclear operations. Together, the collection of USAF capabilities are the means of employing airpower that provides joint-all domain options for JFCs.

Air Force Future Operating Concept (AFFOC)

USAF functions and capabilities facilitate the concentration of airpower in time and space to create opportunities to win the six key fights of future conflict.

1. **Fight to compete and deter:** Airmen compete to nurture partnerships, strengthen alliances, and deter horizontal and vertical escalation throughout the competition continuum.
2. **Fight to get into theater:** Airmen execute ACE when getting into theater as adversaries resist and interfere in our operations from the very beginning of any crisis.
3. **Fight to get airborne:** Airmen generate combat power as the adversary seeks to stop our attempts to get airborne.
4. **Fight for air superiority:** Airmen create windows of opportunity to enable joint all-domain operations.
5. **Fight to deny adversary objectives:** Airmen stop attacks and invasions.
6. **Fight to sustain:** Airmen sustain the fight by conducting logistics under attack, rapidly reconstituting, and applying relentless combat pressure.

Air mobility operations will be vital to pulsing concentrated airpower to prevail in all six fights, but especially in the fights to get into theater and sustain. Air mobility is the preferred means of rapid and agile maneuver to explode the joint force into the theater while resisting interference from the enemy. Furthermore, it is the logistics capability best suited to mass forces at the tempo necessary to prevail in the joint fight.

-- Air Force Future Operating Concept Executive Summary

⁵ For additional information on air mobility core functions, see JP 3-36, *Joint Air Mobility and Sealift Operations*.

AIRLIFT

Airlift transports personnel and materiel to enable the joint force to achieve strategic, operational, and tactical objectives. **Airlift enables rapid and responsive deployment, sustainment, and redeployment of personnel and equipment to/from areas unreachable by other means.** Whether projecting combat power during contingencies, providing logistics to sustain current operations, noncombatant evacuation operations (NEO), or supporting humanitarian assistance, airlift enables persistent joint and multinational operations.

Airlift payloads are delivered via two methods: airland or airdrop. Both methods support the joint principles of surprise, mass, and maneuver through the rapid movement and delivery of forces and material. Mission requirements and the payload's nature (including how, where, and when it is needed) are the primary determinants for selecting a method of airlift. Additional factors such as necessary support, planning time, aircrew experience/qualification, required equipment, resources, constraints, and operational guidance for each mission will affect the selection of a delivery method. Ultimately, airlift's inherent flexibility often allows simultaneous support of multiple delivery methods on a single sortie.

A specialized mission type of airlift is EA. This mission uniquely enables the C2 function for the National Command Authority. EA is a critical component of the United States' deterrent capability by ensuring continuity of government and chain of command for control of nuclear forces.⁶

Operation DESERT STORM's Left Hook

From 18–28 January 1991, C-130s airlifted elements of the XVIII Airborne Corps from King Fahd International Airport to Rafha, in northern Saudi Arabia, near the Iraqi border. This intense airlift supported General H. Norman Schwarzkopf's flanking maneuver to the west, which he described as a "Hail Mary Pass." C-130s flew mission corridors at 10-minute intervals in radio silence. During the airlift, C-130 sorties increased from 200 to more than 300 daily and peaked at more than 350 sorties in one 24-hour period. Nearly 14,000 troops and over 9,300 tons of cargo were moved. General Schwarzkopf said of this fast-paced demonstration of air mobility: "I can't recall any time in the annals of military history when this number of forces has moved over this distance to put themselves in a position to attack."

-- Air Mobility Command Historian

⁶ For more information on EA, see Appendix A.

DELIVERY METHODS

Airland Delivery. Airland involves the movement of cargo between aerial ports in which cargo is unloaded after an aircraft lands. **Airland is the preferred method of delivery because it is usually the most efficient, safest, and least expensive way to deliver personnel and cargo by air.** Airland operations also allow for back-haul capability—the onload of personnel or cargo, including AE, for continued transport from the initial destination port. Some airland missions can be conducted at austere airfields with minimal ground support and security. Extended basing operations require secure, suitable, and conveniently located airfields with appropriate air mobility support assets to facilitate offload. Sound operational procedures, well-planned base defense, and rapid offloading and onloading techniques associated with various airlift aircraft can minimize some of the constraints of airland delivery.

Advantages of Airland Delivery:

- ★ Avoids payload dispersal associated with airdrop.
- ★ Lowers the risk of injuring personnel and damaging cargo.
- ★ Maximizes the opportunity to backhaul cargo and evacuate personnel.
- ★ Permits the maximum use of allowable cabin loads by eliminating the volume and weight penalties of preparing loads for airdrop deliveries.
- ★ Preserves unit integrity and enables rapid unit deployment after landing.
- ★ Requires minimal specialized training and equipment for transported personnel.
- ★ Requires less special rigging and packaging of materiel than airdrop.

Disadvantages of Airland Delivery:

- ★ Increases the interval between aircraft deliveries, depending on an airfield's infrastructure and support capability.
- ★ Prolongs exposure to air or ground attack.
- ★ Requires mission support such as ground-handling equipment, transportation assets, and onward movement and distribution networks.
- ★ Requires suitable airfields or assault landing zones (ALZs) that are suitable for the aircraft's weight, of appropriate length, and available for the anticipated operation.
- ★ Requires suitable lighting and instrument-approved equipment for anything other than day operations in good weather.

Airdrop Delivery. Airdrop is the delivery of personnel or materiel from aircraft while in flight. Airdrop can be conducted by parachute or free-fall delivery. Most airdrops, such as heavy equipment, container delivery systems, and personnel, use parachutes to deliver loads to the ground. This delivery method allows the rapid insertion of combat forces into numerous target areas. Free-fall delivery involves dropping relatively small items, such

as packaged meals or unbreakable objects like hay bales, without the use of a parachute. Airdrop allows commanders to project and sustain combat power into areas where a suitable airfield, ALZ, or ground transportation network may not be available.

Advantages of Airdrop Delivery:

- ★ Eliminates the need for airlift ground support infrastructure and personnel.
- ★ Employs the principle of surprise to support combat operations.
- ★ Minimizes aircraft and personnel exposure to threats in the target area.
- ★ Permits sustainment to units operating away from airfields and ALZs.
- ★ Permits the delivery of concentrated combat forces and materiel, in mass, in minimal space and time.
- ★ Permits the delivery of personnel and materiel in conditions that would prevent airland delivery operations.

Disadvantages of Airdrop Delivery:

- ★ Decreases aircraft range due to the employment of low-level ingress or egress tactics.
- ★ Increases cost of resupply due to rigging, as well as lost cargo opportunity that could have been airland delivered.
- ★ Increases the likelihood of dispersed cargo.
- ★ Increases mission planning time and complexity; requires additional intelligence preparation.
- ★ Increases risk of injury to personnel or damage to cargo.
- ★ Increases susceptibility to unfavorable weather conditions.
- ★ Increases the weight and space required by additional rigging that limits aircraft cargo load capacity.
- ★ Requires special training for riggers, transported personnel, and aircrew.

Operation VITTLES

In February 1948, a Soviet-backed coup seized power in Czechoslovakia and tightened communism's grip on Eastern Europe. West Berlin remained as the lone democratic holdout in the communist sea. In June of that year, Soviet forces closed all overland routes into West Berlin, isolating the city from the outside world. This development led to the largest humanitarian airlift of the Cold War. "We are going to stay, period!" remarked President Truman. The US would sustain the city through the air.

Before the blockade, the city imported 15,500 tons of materiel daily to meet its needs. The minimum requirement for survival was estimated at 4,000 tons a day in theater. C-47s and C-54s were only able to airlift 80 tons of supplies on the first day of the operation. However, once maintenance inefficiencies, turn-around delays, and air traffic flows were ironed out, tonnage airlifted increased. With the help of airlifters from the Royal Air Force, the daily tonnage to Berlin climbed to nearly 13,000. Operation VITTLES would eventually bring over 1.5 million tons of food, medicine, coal, and other supplies into West Berlin. For 462 days, the Allies provided an airborne lifeline to West Berlin. By September 1949, the Soviets conceded that its blockade had failed and reopened the roadways into Berlin.

Operation VITTLES preserved West Berlin, which became a democratic foothold in East Germany. This historic effort proved that joint and combined airlift capability could be massed under a single airlift task force commander to sustain an isolated city using only three airfields. Besides demonstrating US political commitment, the airlift proved the necessity of an expanded long-range heavy airlift fleet.

AIRLIFT EMPLOYMENT METHODS AND CONSIDERATIONS

Organic. The USAF provides the preponderance of intertheater and intratheater air mobility and possesses all DoD air mobility assets designed to execute strategic intertheater airlift missions.

Commercial Contract Airlift. Contract airlift, called commercial augmentation, is a cost-effective method for delivery of combat supplies when US military assets are unavailable or unsuited for the mission. Part 135 Code of Federal Regulations (CFR) certified contract carriers should be approved by the Commercial Airlift Review Board before flying DoD missions. Currently, several contract carriers now specialize in logistics support. Their smaller, specialized aircraft are often more suitable for missions in remote areas where it is unsafe or ineffective to operate larger aircraft.⁷

Multimodal Operations. USTRANSCOM conducts multimodal operations when CCDRs require the movement of large equipment items in volume over long distances. Multimodal

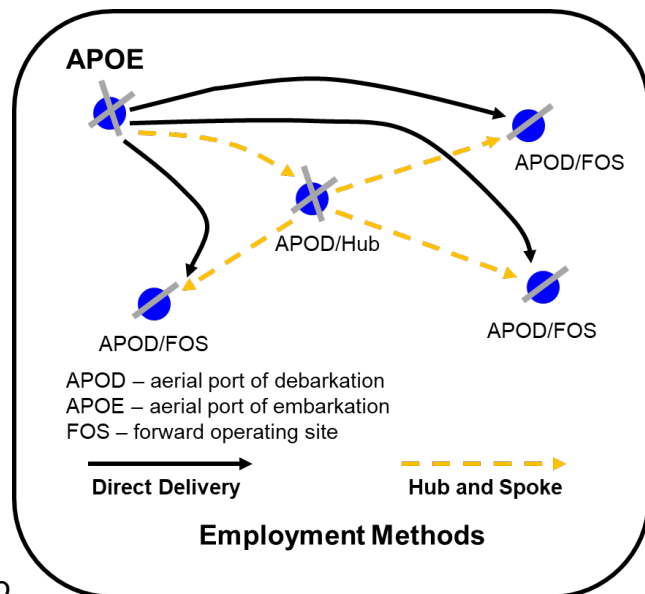
⁷ For additional information on contract airlift, see AMCI 10-402, *Civil Reserve Air Fleet*.

operations are especially relevant when moving equipment and supplies to landlocked operational areas. An example of multimodal operation is where equipment departs CONUS via sealift (the most economical means for transporting large equipment items) and arrives at a permissive seaport near the operational area. The seaport has an adjacent airfield capable of supporting large transport aircraft operations. Upon port arrival, USTRANSCOM uses its ground transportation options to move the equipment from the seaport to the airfield. USTRANSCOM then uses cargo aircraft for the final leg placing the equipment in the operational area. This blend of sealift, ground transportation, and airlift serves as the most efficient and effective method of moving significant amounts of large equipment items. One type of multimodal operation is the incorporation of a hub and spoke airlift segment.

Hub and Spoke. Hub and spoke operations integrate intertheater and intratheater airlift operations. Starting from an aerial port of embarkation (APOE), intertheater airland operations proceed through en route staging bases, to arrive at a main operating base (the hub/aerial port of debarkation [APOD]). Subsequent intratheater airlift moves designated personnel and equipment to forward operating sites (FOSs).

The hub is the focal point for follow-on intratheater airlift missions. Cargo and personnel are processed and readied for transshipment by intratheater assets to FOSs—the spokes, throughout a theater. The hub and spoke method optimizes airlift when supporting multiple operational commanders and operations. It permits load consolidation to maximize lift capability and allows for transload to specialized aircraft (e.g., landing zone-capable, defensive system equipped, smaller aircraft, etc.). Units should consider the required materials handling equipment (MHE) and transportation assets needed to transfer personnel, equipment, and cargo from one aircraft to another.

Transload Operations. During contingency operations, especially in a non-permissive environment, intertheater hub-and-spoke deliveries may be restricted from landing at a particular APOD or FOS, and consequently required to land at another location. In these scenarios, intertheater movements typically transload to intratheater airlift forces for movement onward to the destination. Transload operations are how the hub and spoke works. While an airbridge supports the movement of airlift aircraft from one location to another, transload operations involve the transfer of assets from one aircraft or mode of transportation to another.



In coordination with the affected CCDR, USTRANSCOM usually establishes transload operations outside the operational area at installations permitting DoD commercial operations. From this forward operating site, MAF military aircraft equipped with aircraft defensive systems, if required, complete the sustainment, evacuation, or delivery of personnel and materials on aircraft that can operate from austere or hostile airfields. To ensure transload operations flow properly, the air component commander's director of mobility forces (DIRMOBFOR) deconflicts intertheater hub and spoke operations in coordination with the joint deployment distribution operations center (JDDOC) and the 618 AOC. See the "Commanding Mobility Air Forces" chapter for more information on the DIRMOBFOR.

Airlift Control in Vietnam

The airlift system which evolved over the years spanned the entire country of South Vietnam. This enabled the US forces to exploit the inherent flexibility of airlift and ensure rapid response to priority and emergency requirements.

The system was tailored to maritime logistics patterns. Basically, Vietnam comprised four logistics "islands," with shipping lanes and Military Airlift Command airlift channels connecting them to the [continental US] or Western Pacific supply sources.

From the Air Force point of view the key to responsive airlift was the centralized C2 structure which unified the various control elements into an airlift system. Objectives were positive control, continuous customer liaison, deployed turn-around capability, and real-time monitoring of aircraft and cargo movements. A centralized control structure permitted the airlift commander to be in immediate contact with all flying units, operating locations, customer representatives, and aircraft in flight. The commander could redirect the airlift effort to tactical demands.

-- *Tactical Airlift in Southeast Asia, a Project CHECO (Contemporary Historical Examination of Current Operations) Report, 1972*

Intertheater Direct Delivery. Direct delivery is the airlift of personnel and materiel from the APOE directly to its destination. It is the method of choice for timely and effective delivery of cargo and passengers. To ensure this process flows properly, the DIRMOBFOR should deconflict intertheater direct delivery operations with the air component commander.

Direct deliveries arrive more quickly and avoid the need to transfer cargo to intratheater aircraft for final delivery. Direct delivery shortens in-transit time, reduces congestion at theater main operating bases (MOB), and may enhance the sustainment of contingency locations. Disadvantages include limited aircraft maintenance, cargo, and passenger handling; less parking; and less fuel servicing capability than a hub airfield. These factors may also complicate mission planning. It may also necessitate longer, less flexible flight profiles, which can reduce payload capacity or require AR and additional aircrew, thereby increasing resource consumption. Though advantageous at times, direct delivery via intertheater airlift sacrifices the system efficiency offered by hub and spoke models. The

preference for direct delivery should be balanced against operational necessity. If required, the disadvantages of direct delivery should be offset by capitalizing available load capacity, with an emphasis on full loads whenever possible.

Intratheater Direct Support (Theater Direct Delivery). Direct support intratheater air mobility missions utilize USTRANSCOM assigned aircraft to accomplish intratheater missions. Assets remain under the Operational Control (OPCON) of USTRANSCOM (delegated to AMC) and require detailed coordination between the theater Air Mobility Division (AMD) and the JDDOC if one exists. The 618 AOC normally accomplishes tasking.

Stage, or “Lily Pad” Operations. Aircraft operating ranges, crew requirements, and mission limitations may dictate the need for intermediate stops, referred to as stage or “lily pad” operations. The final leg into the operational area may terminate at the destination or a theater hub. These intertheater operations leverage existing en route support locations and may place a heavier burden on the GAMSS. In a contested environment, these “lily pad” locations may need to be used as more permanent basing options.

Intratheater Channel or “Round-Robin” Operations. Intratheater channel or “round-robin” operations are regularly scheduled intratheater missions that fulfill the routine sustainment function. They typically follow the same routing on the same days and allow predictability for users and planners. The disadvantage of channel missions is that they sacrifice efficiency for predictability. They should be used when requirements are stable to maximize the use of the airlift asset. Intratheater channel missions may present an elevated threat risk in hostile or contested environments due to their predictable nature.

Joint and Multinational Operations. Multinational airlift operations require unity of effort. Allied Tactical Publication (ATP) 3.3.4.3, *Tactics, Techniques and Procedures for North Atlantic Treaty Organization (NATO) Air Transport Operations* standardizes airlift within the context of NATO operations. During the planning and execution phases, planners should leverage air advisors to assess, support, liaise, and advise allies and partners to mitigate interoperability friction points and sustain the integration of capabilities within a multinational force.

AIR REFUELING

AR is the in-flight transfer of fuel from a tanker aircraft to a receiver aircraft. It is an integral part of air mobility and a critical force multiplier to the joint force. Tanker aircraft significantly expand available deployment, employment, sustainment, and redeployment options by increasing the range, payload, persistence, and flexibility of air forces. It serves as a force enabler at the tactical, operational, and strategic levels of warfare. AR allows rapid global reach for air assets with lessened dependence on FOSs. **Most importantly, AR provides the JFC the ability to maneuver and mass forces to coerce or defeat the enemy at times and places where they are least prepared.**

AIR REFUELING OPERATIONS

There are six primary types of AR operations: nuclear operations support, global strike support, airbridge support, aircraft deployment support, theater support, and special operations support. While tankers are primarily AR assets, they may also operate as dedicated airlift aircraft or as “dual role” tankers and airlifters (transporting passengers and cargo during AR missions). Additionally, tankers have been used for AE and as on-scene commanders for search and rescue operations.

Nuclear Operations Support. AR supports nuclear operations through bomber and C2 support:

- ★ **Bombers in Support of Nuclear Operations.** Tanker assets are incorporated into nuclear operations to support bomber requirements. Through AR, the payload, range, and endurance of bomber aircraft are significantly increased, further enhancing their flexibility to strike distant targets and increase bomber persistence. Bombers may be launched during periods of increased tension and proceed to orbit areas to provide the national command authority with flexible nuclear response options. With AR, bombers can maintain ready status in forward air orbits until they are directed to fulfill their mission or are recalled.

- ★ **C2 in Support of Nuclear Operations.** In the same manner, the enhanced flight endurance provided by AR is a component of the strategic airborne command post concept. It enables the President and SecDef to continue directing military action from an airborne platform.

Global Strike Support. Tankers give strike platforms the ability to reach targets and recover to safe areas without relying on intermediate basing locations. This provides CONUS-based airpower a global presence and enables capabilities CDRs may not otherwise have. In such operations, tankers may be employed in a variety of C2 arrangements: via a support agreement between CDRs, by a transfer of OPCON or Tactical Control (TACON), or by assigned or attached AR forces in theater. These arrangements may already be established in OPLANS and activated as needed, or established and enacted ad-hoc, as required.

Airbridge Support. An airbridge enables the movement of aircraft between distant locations, without intermediate fueling stops, which would otherwise be impossible without AR capabilities. An airbridge links the CONUS with one or more theaters to accelerate operations by reducing required en route refueling stops. It reduces aircraft on the ground at staging bases, minimizes en route delays, enables airlift to maximize payloads, and allows direct delivery of personnel and cargo. Airbridges require significant tanker allocation and international basing that may reduce tanker availability for other missions.

Aircraft Deployment Support. The term “coronet” denotes the movement of air assets, usually fighter aircraft, in support of contingencies, rotations, and exercises or aircraft movements for logistic purposes. These flights may include a dual-role refueling and cargo or passenger-carrying element. They normally have long planning, tasking, and execution lead times. The 618 AOC normally plans the tanker portion of the flight. In most

situations, a tanker accompanies the receiver aircraft for most of the mission, especially during an oceanic crossing.

Theater Support (Combat Air Refueling Support). During combat operations, the highest priority for intratheater AR forces is normally supporting combat and combat support aircraft executing the joint air operations plan. This is especially true during the initial phases of a conflict. Combat aircraft may be based well outside enemy threats and may need tankers to give the range and increased weapons load necessary to engage targets. Airborne C2, battle management, and Intelligence, Surveillance, and Reconnaissance (ISR) aircraft are used to manage, direct, conduct, and assess combat operations. Without in-flight refueling, these assets have limited endurance and may require extensive regeneration periods between sorties. In a peer or near-peer conflict, tanker support may be required in known threat areas. This will make counterair or suppression of enemy air defenses a likely requirement.⁸

Special Operations Air Refueling Support enables special operations forces (SOF), global reach and supports endurance and persistence in an operational area. AMC maintains AR crews trained to air refuel special operations aircraft. Successful operations require specialized equipment, crew training, and operational procedures. When assigned or attached to a joint task force, these forces may fall under a special operations functional component commander who reports directly to the JFC.

AIR REFUELING CONSIDERATIONS

Force Extension. Force extension is the AR of one tanker to another tanker, to consolidate fuel among a limited number of aircraft. It reduces the total number of airborne tankers and maximizes the amount of fuel available to transfer to receiver aircraft. This capability is also used whenever the fuel requirements of an escorting tanker and its receivers exceed the tanker's takeoff fuel capacity. Aircraft should operate within weight limit constraints, including limits for takeoff and landing (a maximum cap for combined

Operations ODYSSEY DAWN and UNIFIED PROTECTOR

In March 2011, Muammar Qaddafi's regime began firing on Libyan civilians in an attempt to quell civil unrest. On March 19th, coalition forces began enforcing U.N. Security Council Resolution 1973 to protect civilians and civilian populated areas under threat of attack. In preparation for kinetic strikes, the US quickly deployed several KC-135 tankers to Moron Air Base, Spain. AR enabled coalition fighter aircraft to use distant bases that otherwise would not have been within range of the targets. Highlighting the tanker force projection and force enabling capability, three B-2 bombers flew from Whiteman Air Force Base, each refueling four times, enabling them to destroy hardened shelters used by Libyan fighter-bombers. Throughout Operation ODYSSEY DAWN, tanker crews routinely flew 10-hour missions extending the on-station time of coalition fighters.

⁸ For additional information on counterair operations, see AFDP 3-01, *Counterair Operations*.

aircraft, fuel, and cargo weight). An increase in cargo weight may decrease an aircraft's available internal fuel load. Tankers operating "dual role" as airlifter and tanker (transporting passengers or cargo during AR) may require force extension. Force extension provides the benefit of extending the deployment range of receiver aircraft by ensuring the supporting tankers do not have to make en route fuel stops.

AR Systems. AR is conducted using one of two systems: boom or drogue. Most USAF aircraft and a relatively small number of allied aircraft use the boom system. Generally, USN, USMC, USA, USAF SOF rotary-wing or tiltrotor aircraft, and most allied aircraft use drogue refueling.

Joint and Multinational Operations. Joint and multinational AR operations require unity of effort. ATP 3.3.4.2, *Air-to-Air Refueling*, standardizes AR within the context of NATO operations. Airspace availability is a common constraint in refueling operations. Standardized formation procedures across allies and partner nations allow aircraft to operate in compressed airspace, a critical capability to enable refueling of multiple receivers or multiple formations.

Air Refueling Airspace. Most intratheater AR is conducted in airspace specifically designated for AR. Operations below armed conflict generally utilize AR information (e.g., airspace boundaries, altitudes, and communication data) found in DoD Area Planning Flight Information Publications. During conflict, AR airspace and routing to and from AR airspace may change in response to operations and threats. Applicable AR information is published in the airspace control plan (ACP), airspace control order (ACO), and special instructions (SPINS), and should be followed to avoid conflicts or hazardous situations, especially during joint or multinational operations where midair collision risk is high.⁹

There are two types of refueling areas: tracks and anchors. Aerial refueling tracks are established to accommodate refueling operations along a prescribed route. They generally have segments that allow refueling to occur without constant maneuvering. Aerial refueling anchors generally consist of smaller rectangular airspace blocks that require aircraft to fly racetrack orbits with increased maneuvering. The choice of track or anchor depends on factors such as receiver mission and routing, number and routing of tankers, fuel requirements, receiver number, and type, weather, time available to accomplish rendezvous and refueling, and airspace availability. At times both types of refueling areas (tracks and anchors) may be used to facilitate the same operation. For example, pre-strike refueling may be accomplished in an anchor to facilitate package formation and post-strike refueling may be accomplished along a track to expedite receiver aircraft recovery. In addition, special-purpose AR areas may be established using an altitude reservation. Detailed information on AR track and anchors for peacetime operations can be found in Federal Aviation Administration Joint Orders or theater-specific instructions.

⁹ For additional information on airspace control, see AFDP 3-52, *Airspace Control*.

32 AOG/C5 during OAF: “Limited airspace – near midair collisions every night!”

AE capability is constituted by a system of systems including AE liaison teams (AELT), AE crew stages, AE crews, Critical Care Air Transport Teams (CCATT), other specialty teams, and the En Route Patient Staging System (ERPSS). These forces execute patient movement aboard MAF, other service, contracted, and international partner aircraft. AE forces operate as far forward as aerial port operations occur, including remote and austere airfields. The system is designed to be flexible and interface with joint, multinational, and SOF.¹⁰

C2 of AE missions are consistent with all air mobility missions. USTRANSCOM is responsible for the patient movement mission to the joint force. AMC is the lead command for AE supporting patient movement and intertheater AE movements. Intratheater AE

19

movements are supported by the CCCR using assigned air mobility and AE assets. CCCRs can assume intertheater missions if coordinated or requested by USTRANSCOM when it is advantageous for the patient(s) requiring AE services. USTRANSCOM can assume the intratheater mission if coordinated or requested by the regional CCCR. AMC has the responsibility to operate the common-user AE force and to procure commercial augmentation (e.g., civilian air ambulance).

The AMC Surgeon General (SG) is USTRANSCOM/SG's program manager responsible for resourcing, maintaining, and recycling medical equipment to support DoD patient movement. They oversee the Global Patient Movement Integration Center, which does the strategic planning for patient movement. There are three USTRANSCOM Patient Movement Requirements Centers (TPMRC): TPMRC-A for the Americas, TPMRC-E for the East, and TPMRC-W for the West. AMC manages and operates AE intertheater and hub and spoke operations to provide AE elements and planning assistance to all theaters. United States Air Forces in Europe (USAFE) and Pacific Air Forces (PACAF) are responsible for their theater-assigned AE units and associated airlift units. During contingencies where requirements exceed theater AE capabilities, AMC normally provides tailored augmentation forces to support increased intratheater requirements and expands or establishes the intertheater capability to support movement between theaters or to CONUS, as required.

AEROMEDICAL EVACUATION CONSIDERATIONS

Patient Validation. The theater validating flight surgeon and patient movement requirements center provides clinical and administrative oversight of patients requiring AE. Once validated, these movement requirements are sent and coordinated with the appropriate AOC or other appropriate agencies for obtaining space on AE airlift missions. AE squadron operations are conducted through operational wing C2 channels.

En route care begins once a validated patient movement request is passed to the air component agency for execution. AE is not the only mechanism for patient movement. Casualty evacuation refers to casualty movement aboard vehicles or aircraft (often rotary wing aircraft). Medical evacuation traditionally refers to US Army, Navy, Marine Corps, or Coast Guard patient movement using pre-designated aircraft temporarily equipped and staffed for en route medical care. Patient evacuation from the point of injury to initial treatment at a healthcare facility is the responsibility of each Service component and is controlled via a Patient Evacuation Coordination Cell (PECC). AE Liaison Officers (AELNOs) are a part of PECC and synchronize tactical evacuation requirements to strategic evacuation assets.

En route care transport team. En route critical care (ERCC) transport capabilities consist of specialized medical teams who assist in the global patient movement system. These teams can deploy rapidly and are available to maintain or enhance the standard of care provided to critically ill or injured patients requiring continuous stabilization and highly advanced care during transport. ERCC units include the CCATT, special operations surgical team, and SOF medical element. Pararescue jumper teams may also provide limited critical care transport as a collateral mission. Other enabling capabilities include but are not limited to, point of injury care, and post-surgical critical care. CCATTs

provide intensive care, with AE crews or oversight by qualified aircrews, to evacuate patients requiring advanced care during transportation.¹¹

Aircraft considerations. Aircraft capabilities and constraints such as configuration, patient load, airfield restrictions, range, pressurization restrictions, and AR abilities should be considered for AE operations. The ideal aircraft and mission may not be available. Instead, AE operations are executed by optimizing the use of available aircraft. Optimization may include combining cargo and patients on the same aircraft, provided it does not interfere with patient care. Approval to move cargo with AE patients is coordinated through the controlling AOC and provided by the medical crew director. Airlift for urgent and priority patients is tasked to aircrew in alert status, to aircraft diverted to support AE, or through contracted air. Patients requiring in-flight medical care, but not supported by the AE system, may move by other Service or civilian air ambulance. However, the civilian air ambulance should only be used to save life, limb, or eyesight or if it is sufficient and more cost-effective. In all cases, theater patient movement requests should be validated through the USTRANSCOM patient movement requirement center.

Defense support of civil authorities (DSCA). Most FEMA-requested patient evacuations requiring air transportation are accomplished by AE assets. USTRANSCOM validates AE requirements in support of civilian authorities. Once patient movement is validated, the requirement is tasked to the appropriate AOC. AMC also provides trained AE coordinating officers and coordinating elements for DSCA from existing Regular and Reserve Component forces in the execution of the National Response Framework. The type of AE assets depends on the size and scope of the disaster or contingency and may be supported by in place AE infrastructure or deployment of AE assets to the disaster area.

The director of patient stage operations is the senior AE DoD representative responsible for AE efforts at an aerial port/APOE and for coordinating resource requirements with DoD, state, and federal units and agencies at the APOE. This person is responsible for all aspects of patient care at the APOE.¹²

AE with Special Operations and Personnel Recovery. Some expeditionary forward deployed forces, such as SOF, Marine expeditionary forces, and personnel recovery forces, do not possess organic patient evacuation capability and should identify requirements for, and obtain patient evacuation support at, forward airbases.

Conventional AE support may be required for SOF Marine expeditionary forces and personnel recovery forces that do not possess organic conventional AE capability. Casualty evacuation for SOF is complicated because they operate with small and dispersed teams, often from locations not easily accessible for conventional fixed wing aircraft.

SOF are responsible for their own medical care and casualty evacuation from forward areas to airfields where prepositioned specialty care teams (e.g., CCATT) assume

¹¹ For additional information on en route critical care, see Department of the Air Force Instruction (DAFI) 48-107V2, *En Route Critical Care*.

¹² For additional information on DSCA, see AFDP 3-27, *Homeland Operations*, and JP 3-28, *Defense Support of Civil Authorities*.

responsibility for casualties. Normally, the interface point with SOF is the ERPSS. ERPSS personnel have contingency operations training and, in forward areas, should be ready to provide limited holding for patients who have been provided resuscitation and surgical intervention.

Detainee Support. AE personnel do not normally provide support to detainees unless they require in-flight medical care. Security of detainees is not a responsibility of the en route care system.

Joint and Coalition Support. Other services and coalition forces use various ground transport and aircraft for patient movement. In the interest of the US government and approved by the appropriate USAF component, the affected CCCR, *and* the controlling aircraft authority, AE crewmembers or other en route care forces may perform appropriate duties in non-USAF aircraft. Similarly, joint and combined medical forces may also integrate with Air Force AE forces on MAF aircraft if authorized by similar authorities. In either case, mission validation, C2, and mission support will be managed by the established Theater Aeromedical Evacuation System (TAES).

AE of Contaminated or Contagious Casualties. Patients with known or suspected contamination from CBRN agents are not normally transported within the aeromedical patient movement system. Nevertheless, when approved for AE, chemically or radiologically contaminated casualties should be decontaminated before entering the AE system unless directed otherwise by SecDef. USTRANSCOM/SG maintains a list of critical bioterrorism and Centers for Disease Control and Prevention agents. The priority concern is communicable person-to-person agents. Patients with contamination should be quarantined and treated in place and are not recommended for evacuation. Movement of highly contagious patients requires approval from the CDRUSTRANSCOM and the CCCR for the AOR, as well as a SecDef exception to policy.¹³

Patient Movement Items and Aeromedical Evacuation Support Equipment. PMIs are specific medical equipment and durable supplies that should be available to support patient movement. Medical logistics and AE personnel manage inventory availability at PMI centers, cells, and nodes and ensure asset visibility and flow of PMI through available transportation methods to meet requirements. Asset visibility is provided via the PMI asset tracking system (PMI-ATS). Deployed PMI system teams collocate at key interface points and theater medical treatment facilities to provide initial patient evacuation capability, sustain patient evacuation operations, and help recycle PMI assets to minimize equipment turnaround time. During contingency operations, PMI assets and PMI-ATS requirements are initially identified by the CCCR in coordination with the AMC/SG's office and pushed to support patient movement at key patient insertion points in the AE system. Steady-state PMI support is supplied by the combatant command (CCMD) as required.¹⁴

¹³ For additional information on CBRN contamination, see AFDP 3-40, *Counter-Weapons of Mass Destruction Operations*, JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments*, and *Mobility Air Forces Countering Weapons of Mass Destruction Concept of Operations*.
¹⁴ See DAFTTP 3-42.8, *Expeditionary Medical Logistics (EML) System*, for additional information.

AIR MOBILITY SUPPORT AND CONTINGENCY RESPONSE

GLOBAL AIR MOBILITY SUPPORT SYSTEM

Air mobility support is provided by the GAMSS, which is the system of operating locations, mobility support forces, and interrelated processes that enable aerial deployment, employment, sustainment, and redeployment of US forces. GAMSS includes an integrated series of fixed (inside the continental United States [CONUS]) and en route (outside the continental United States [OCONUS]) support locations, as well as deployable contingency response (CR) forces.

En route Structure. AMC's en route system serves as the baseline infrastructure of the GAMSS. The air mobility operations wings (AMOWs) that comprise the en route system are considered "forward stationed" and are staffed to provide immediate crisis support. This structure is essential to providing a responsive and agile en route network because it ensures the AMOW commander has the authority to shift assets internally to keep all nodes of the en route "theater" at a capacity commensurate with the operational demand. Furthermore, the AMOWs and each air mobility squadron (AMS) respond to the direction of the 618 AOC for mission priorities and changes. Except for a full airbase opening package, the GAMSS is not self-sustaining over extended periods. Usually, fixed, and mobile teams operating OCONUS rely heavily on supported commanders or host nation for base operating support (BOS). The GAMSS should clearly articulate its requirements and establish the proper support agreements.

Deployable Forces. CR forces provide the USAF's rapid response airbase-opening capability which can assess, open, and operate airfields at any location (austere to commercial) with minimal support. They create forward contingency locations agnostic to follow-on aircraft or mission and provide deployable mobility support where none exists. CR forces provide the core air mobility support functions, as well as additional combat support functions, enabling them to operate airfields and self-sustain. These additional functions include weather, civil engineering, logistics, contracting, security forces, medical, contracting, finance, communications, logistics, air traffic control, public affairs, intelligence, legal, and airfield operations. CR forces may be comprised of CONUS and overseas GAMSS organizations and can be tailored to meet specific Air Force, USTRANSCOM, and joint force operating requirements.¹⁵

AIR MOBILITY SUPPORT CORE CAPABILITIES

The core capabilities of air mobility support are C2, aerial port, and maintenance. The GAMSS provides these capabilities at fixed, en route, and deployed locations.

Command and Control. CDRUSTRANSCOM delegates OPCON of airlift and AR assets to the COMAMC but, in very rare instances, to a CDR's commander, Air Force forces (COMAFFOR). In both cases, GAMSS forces provide initial C2 to higher headquarters for deploying forces through organic and deployable systems.

GAMSS provides its own C2 systems to plan, flow, and track air movements and provide in-transit visibility (ITV) of cargo and passengers. C2 system requirements may include

¹⁵ See AFDP 4-0, *Combat Support*, for additional information.

various radio and satellite communications capabilities. Additionally, mobility mission planning and execution systems to support airfield operations and transient aircrew may be required.

ITV and flight following are among the most important services GAMSS provides. Commanders rely on accurate and timely ITV to efficiently manage operations. To a degree, GAMSS's effectiveness relies on the ability to effectively integrate C2 data into a comprehensive ITV picture. (NOTE: in select cases, Air Force Special Operations Command (AFSOC) special tactics teams (STT) can provide limited initial capability for both air traffic control (ATC) and aircraft reporting.)

Future Air Mobility C2

The Joint Warfighting Concept necessitates a transition to integrated Joint All-Domain C2 (JADC2) systems. To realize this, MAF aircraft and GAMSS locations may augment or enhance traditional C2 systems to enable joint operations in contested, degraded, or operationally limited environments.

Aerial Port. An aerial port is an airfield designated for the sustained air movement of personnel and cargo. GAMSS possesses a robust aerial port capability. En route aerial port operations are sized to ensure a minimum throughput capacity based on established planning factors (not on steady-state workload). Deployed aerial port operations are sized to meet the forecasted workload requirements for the operation. GAMSS units are designed to establish and operate air mobility terminals and can onload and offload a specified number of aircraft based on forecasted requirements. GAMSS aerial port specialists establish marshaling yards and traffic routing for cargo, aircraft servicing, passenger manifesting, and air terminal operations center services. GAMSS aerial port personnel are also responsible for the transmission of movement manifests and ITV data.

★ **Materials Handling Equipment.** A key resource critical to the throughput of cargo and personnel is MHE. MHE includes all ground equipment necessary for cargo loading and unloading, a capability that should be analyzed during both steady-state and contingency planning. Commanders and planners should coordinate closely to ensure the right types and quantities of MHE are available to support operations. It is essential to get MHE and GAMSS items in the time-phased force and deployment data (TPFDD) early to increase throughput and facilitate overall maneuver, deployment, and sustainment efforts. Likewise, the GAMSS force commander should pare and tailor the deployable equipment to meet each tasking. The TPFDD should be evaluated for any oversized or outsized cargo or equipment, to determine if aircraft loader requirements (e.g., multi-pallet trains) exist. When planning war reserve materiel (WRM) for use, MHE should be fully operational, tasked in sufficient quantity, and be of the correct type. The timelines to request and gain WRM release should be considered in planning. An assessment of host nation MHE capability is a key factor to consider. Host nation MHE available at a forward location should lessen airlift requirements by allaying the need for MAF aircraft to move equipment forward. Planners should consider operational contracting support to leverage the host nation's capabilities to the greatest extent possible.

The Aerial Port Role in Vietnam

The aerial port role was critical in tactical airlift. In the Tet Offensive and siege at Khe Sanh in 1968, aerial port facilities were saturated. Aircraft were delayed for loading or unloading; the limiting factor was not aircraft or aircrews, but the ability of the aerial port to move the cargo. It became apparent to tactical airlift personnel that the Air Force must maintain an active, progressive aerial port nucleus capable of rapid expansion and able to meet requirements of contingency operations, even as US forces withdrew.

-- *Tactical Airlift in Southeast Asia*, a Project CHECO Report, 1972

Maintenance. The ability to provide basic maintenance, particularly for airlift aircraft, is critical to the air mobility enterprise. Designed primarily to support air mobility aircraft operations, en route maintenance units are not intended to provide sustainment maintenance. A contingency response wing (CRW) provides mobile GAMSS maintenance capability comprised of mostly cross-functional maintenance specialties designed to provide aircraft marshalling, parking, refueling, and limited aircraft repair capability. When specialized aircraft repair capability is required at a contingency location that exceeds the core capacity at the site, a maintenance recovery team (MRT) should be deployed to accomplish the repair. MRTs are normally sourced from the aircraft's home station, or coordinated between AOCs when required capabilities are available through assigned or attached theater mobility forces. As a rule, planners and units receiving maintenance augmentation from GAMSS forces should consider supplementing maintenance capability as soon as practical to ensure continued operations.

★ **Aerospace Ground Equipment (AGE).** AGE, powered and unpowered, is necessary to support the maintenance and servicing of aircraft during ground operations. Planners should complete pre-deployment analysis (to include host nation support) to ensure sufficient quantity and operational status of an airfield's AGE. It may be necessary to augment the existing capability if required equipment is unavailable or non-operational. However, due to the high multi-Service competition for airlift resources during the initial stages of deployment and the objective of optimizing the deployed footprint, logistics planners should minimize or delay the forward deployment of equipment.

★ **Replacement Spares Package.** Aircraft spares are parts needed for repairs. Typically, MAF deploy with readiness spare packages sufficient to support the expected airflow for a given amount of time. Planners should prepare their packages to operate independently, with limited reachback, and in a communications degraded environment for the initial part of the crisis. However, for operations that begin with a high operations tempo soon after the arrival of combat forces and continue for an extended period, time-definite delivery of replacement spares should be established early in the deployment sequence. Furthermore, planners should make every effort to preemptively identify aircraft parts that are essential for flight and ensure spares

packages have sufficient authorizations. Non-availability of spare parts can cause an aircraft to become non-mission capable. Aircraft that are non-mission capable occupy valuable ramp space and negatively impact mobility throughput. Additionally, an adversary may degrade or disrupt these lines of communication. In a contested environment, logistics planners should have proactive and redundant logistics readiness plans that enable continued resupply and anticipate maintenance needs.

Air Mobility Support for the Israel-Hamas Conflict

When Hamas attacked Israel on 7 October 2023, AMC set the theater in ways that gave USTRANSCOM and multiple other CCDRs (US Central Command and US European Command) the flexibility and agility to execute a myriad of deterrent options. Rather than wait for the TPFDD or requirements to flow in a named system, AMC had the necessary authorities to strategically preposition materiel and equipment (e.g., MHE, aircraft spares, medical supplies) at key in-theater locations to sustain mobility air forces at the forward edge of the battlespace. More importantly, commanders were able to pulse the back-end supply chain network to accelerate the production of aircraft parts and supplies needed in the event of a crisis. These actions signaled the readiness, will, and resolve of the United States. Ultimately, air mobility moved and maneuvered forces to gain positional advantage and signal the lethality available to multiple CCDRs.

AIR MOBILITY SUPPORT CONSIDERATIONS

Aircraft rescue and firefighting. Planners should determine what aircraft rescue and firefighting capabilities exist at an airfield and if they are sufficient for the planned operation. Degraded or non-existent firefighting capabilities limit airfield suitability for specific aircraft.

Force Protection (FP). Planners should evaluate security at all operating areas for the operation. FP considerations may require small Security Force teams to provide local or airfield FP for a brief period. Forces deployed to or transiting through a CCDR's AOR are subject to the TACON for FP standards established by the CCDR and the FP measures established by their Service chain of command. Conditions may also require an FP liaison to coordinate at the local level with the CCDR's forces. Additionally, planners should assess the small unmanned aerial systems (sUAS) threat in the operational area and determine if deployable counter-sUAS systems are required. Finally, AMC has a unique mission of providing aircraft security (both in-flight and on the ground) in the form of Phoenix Ravens.¹⁶

Intelligence. The AOC ISR division (specifically the Senior Intelligence Duty Officer) functions as the focal point for intelligence support during mission execution. It provides warnings on new or emerging threats to facilitate dynamic threat avoidance.

¹⁶ For more information on force protection, see AFDP 3-10, *Force Protection*. For more information on force protection planning considerations, see "Threat Mitigation" in Chapter 4.

Weather. Accurate and timely weather and environmental information is essential during every phase and aspect of air mobility planning and execution. Beyond providing a mission launch or en route brief, weather and climatology data assist in airfield location selection, logistics requirements, AR route selection, and optimal flight paths. Weather information allows planners to anticipate events such as hurricanes or major storms and adjust aircraft flow, cargo loads, and timing to ensure effective, efficient, and safe mission accomplishment. Commanders, their staffs, and operators should obtain and consider the following information:¹⁷

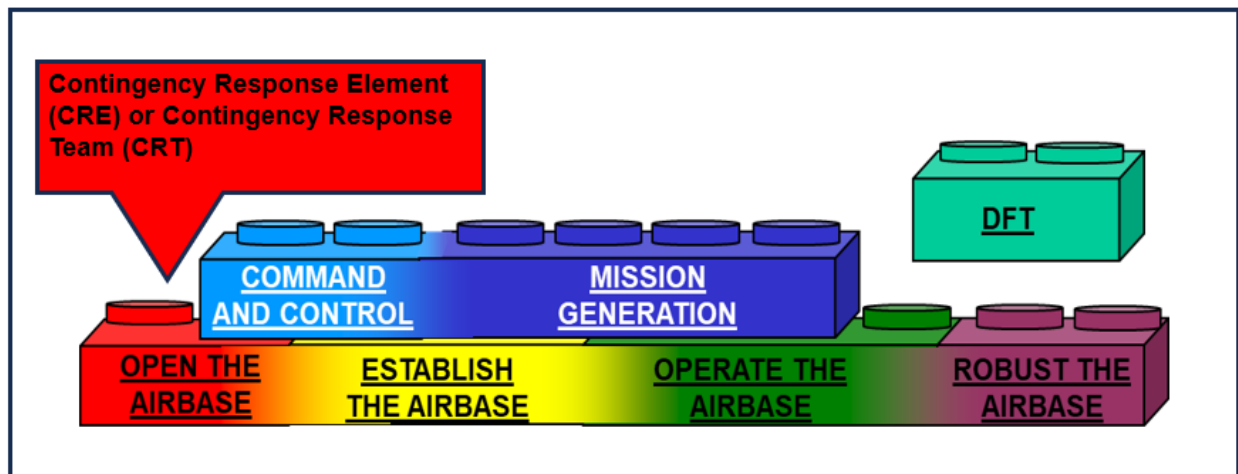
- ★ Seasonal and specific event climate and hydrology data for initial airfield placement and runway orientation, as well as weather sensing instrumentation siting.
- ★ Space and atmospheric weather effects that will impact C2 systems and shape alternate plans.
- ★ Threat outlooks, graphical analyses products, and regional forecasts that provide worldwide and theater-specific weather risk over a multi-day period.
- ★ Volcanic ash coverage predictions after an eruption occurs.
- ★ Weather and climate information to aid in equipment and supply requirement decisions (e.g., navigation aids and deicing or snow removal equipment) that should be programmed into the OPLAN.

Special support equipment. Special support equipment or other resources unique to a particular circumstance or location can impact throughput. For example, a lack of snow removal equipment at a cold-weather airfield during operations can cause delays. Items such as these should be accounted for on a case-by-case basis.

Working Maximum on Ground/Parking Maximum on Ground. The maximum number of aircraft at a given location that can be turned simultaneously is called the working maximum on ground (MOG). Parking MOG is the physical parking space available for DoD airlift aircraft and contract carriers. It should not exceed the number of spots identified on the most current parking plan and may be limited by factors such as host or partner nation agreement, parking spots available for hazardous cargo, or other infrastructure limitations. Local commanders determine working MOG based on the most restrictive planning factors (e.g., manpower, servicing equipment, maintenance, and aerial port supportability, etc.) and notify appropriate C2 and planning agencies for dissemination. Geospatial engineering personnel analyze the physical environment against mission requirements to calculate and validate a location's parking MOG capability and capacity.

¹⁷For additional information on weather, see AFDP 3-59, *Weather Operations*.

Airbase Opening. CR forces are limited in number and require careful planning when implementing their use, especially during a highly contested peer-to-peer conflict. CR forces are normally the first USAF presence on an expeditionary airbase regardless of how the base is gained (e.g., base seizure or transfer from a host nation) or which follow-on US entity operates the base. CR forces are eventually replaced by follow-on forces. When opening a base, CR forces normally coordinate actions with theater command elements to ensure theater-specific responsibilities such as FP to meet requirements. All deployed CR forces should integrate with the host for FP and communications. Defined operational areas and responsibilities for CR personnel should be specified during the planning of seizure and airbase opening operations. Additional issues that should be considered during planning may include airfield handoff from assault forces to CR forces, required follow-on CR forces (beyond initial forces), and redeployment and reconstitution of CR forces once other expeditionary support forces are in place (normally not later than D+45 days). See Appendix C for a description of the CR forces used in these operations.



Force Element Construct

Foreign Airbase Utilization. Air mobility forces may often operate out of foreign airfields with limited support from United States military personnel. Air advisors validate foreign airfields to upload, download, and service US air mobility assets with limited or non-existent US presence. Utilization and prioritization of air advisors can also improve partner nation capabilities to increase logistic support options for mobility planners. Air advisors should establish relationships with partner nations vital to operations before armed conflict. These relationships can facilitate an understanding of foreign procedures, timelines, and requirements for air operations. Air advisors enable access and influence the host nation, inform operational planning, and provide avenues for multi-national integration.

Operation UNIFIED RESPONSE

Following the 12 January 2010 earthquake in Haiti, US military forces supported the disaster relief effort. USAF forces were tasked to manage airfields supporting the relief effort. An Army rapid port opening element joined an Air Force contingency response group (CRG) to form USTRANSCOM's Joint Task Force - Port Opening. An aerial port of debarkation was established at the Toussaint Louverture International Airport in Port-au-Prince. Additionally, the CRG was declared the senior airfield authority, assuming responsibility for parking aircraft that transited the main ramp, offering cargo offloading services to users, loading evacuating American citizens, providing C2 for fixed wing operations, and ensuring airfield and perimeter security. In total, the CRG worked over 6,000 sorties, downloaded 31,000,000 pounds of humanitarian cargo, and safely evacuated 15,500 American citizens.

AMD Augmentation Units. Theater AMDs are manned to support operational requirements during steady-state cooperation and competition. AMD augmentation units provide an air component commander with rapid, tailored, and operational-level C2 forces that extend the existing theater AMD infrastructure when operations exceed the existing AMD's capacity.

Each AMD augmentation unit presents personnel with expertise and experience in airlift, AR, C2, logistics (airlift requirements, aerial port, and aircraft maintenance), and AE planning and execution.

AMD Augmentation. AOCs are often sized to meet specific mission or theater requirements. Because each theater air component's allocated air mobility mission varies in size and scope, their AMD's normal manning varies widely. Planners should consider strategic warning and response time of augmentation sources (Regular and ARC units) when determining the availability of augmentation capabilities. The AMD is normally organized with core teams to control air mobility, airlift, AR, and AE. Theater-specific requirements dictate the support necessary from each team and necessitate AMD augmentation. For example, an AMD without a manned aeromedical control team would require full augmentation as theater operations increase.

Theater AMDs should adjust their manning and organization to meet the needs of their theaters. Operations may range from humanitarian assistance to major theater combat. The AMD core competencies and specialties are still required, but levels of support and personnel involved may dramatically increase based on current operating conditions. Depending on the duration of operations, the theater staff, in coordination with the AMD staff, should begin using global force management (GFM) and deployment processes to begin planning for sustainment of the long-term manpower needs within the AMD.

As competition escalates and the existing AMD is unable to meet demands (i.e., requirements exceed manpower capability), AMD augmentation personnel are available to provide short-term, rapid response to contingency air mobility C2 needs to conduct the AMD's core competencies of intratheater airlift, AR, and AE planning and execution.

Additionally, active-duty air mobility operations squadrons (AMOSs) can provide limited and MAF-centric combat airspace, intelligence, and C2 systems administration to augment an AOC's support and specialty teams. ARC AMOSs are also postured and trained to conduct AMD augmentation operations.

AMD augmentation units are not designed or manned to provide long-term sustainment augmentation to the AMD. Their core competency and the capability provided is for short-term responses to meet contingency air mobility C2 needs. Working with the COMAFFOR staff, the AOC may determine that long-term manpower adjustments are needed to sustain operations.

CHAPTER 3: COMMANDING MOBILITY AIR FORCES

“The Air Force organizes, trains, and equips forces to be an air component to a joint force commander (JFC). As part of the joint force’s air component, our forces must be prepared to accomplish JFC objectives. The air component commander’s administrative authorities are derived from Title 10, U.S. Code, and exercised as the COMAFFOR. The air component commander’s operational authorities are delegated from the JFC and exercised as both the COMAFFOR, over Air Force forces, and as the functional joint force air component commander (JFACC), over joint air forces made available for tasking. Thus, the air component commander leads Air Force forces as the COMAFFOR and the JFC’s joint air operations as the JFACC. This duality of authorities is expressed in the axiom: Airmen work for Airmen and the senior Airman works for the JFC.”

--Air Force Doctrine Publication (AFDP) 1, *The Air Force*

Since the COMAFFOR and JFACC are nearly always the same individual, this AFDP will use the term “air component commander” when referring to duties or functions that could be carried out by either or both, unless explicit use of the term “COMAFFOR” or “JFACC” is necessary for clarity.

Air mobility is a global capability concurrently serving multiple CCDRs and other government agencies. The preponderance of MAF are provided by a single CCMD, USTRANSCOM. However, considerations for unity of command and unity of effort, as well as the nature of some operations, may require MAF transfer from USTRANSCOM to a CCDR with a defined AOR.

The *Unified Command Plan* (UCP) specifies CCDR roles and responsibilities. The SecDef supports these CCDR roles and responsibilities and optimizes support for DoD and non-DoD common-user requirements by assigning and/or allocating MAF through the *Forces for Unified Commands Memorandum* and assignment tables in the *Global Force Management Implementation Guidance*.

The SecDef allocates forces and specifies command relationships for allocated forces annually through the Chairman of the Joint Chiefs of Staff’s (CJCS’s) *Global Force Management Allocation Plan* (GFMAP). When supported CCDRs determine that additional MAF, over and above those previously assigned or attached, are required to support operations, they may submit a request for forces (RFF) to the SecDef through the CJCS. To meet validated CCDR requirements and taskings, the SecDef may allocate additional forces. The SecDef balances the mobility requirements of the requesting CCDR against the requirements of competing CCDRs. When approved, the SecDef determines the command relationship and specifies authorities through an execution order.¹⁸

¹⁸ For additional information on force allocation, see JP 1 Vol 2, *The Joint Force*, and CJCSM 3122.01A, *Joint Operations Planning and Execution System (JOPES) Volume 1, Planning and Policy Procedures*.

CCDRs requesting additional MAF from the SecDef should first address the following conditions:

- ★ The CCDR will use the forces at or near 100 percent of their capability with little or no residual capability for other global missions.
- ★ The forces will be used regularly and frequently over a period of time, not just for a single mission.
- ★ The CCDR can effectively C2 the forces.

If the answer to all three conditions above is “yes,” then the functional forces may be attached to the requesting CCMD. If any of the above conditions are answered “no,” functional forces should remain under the OPCON of USTRANSCOM and be tasked to support.

US TRANSPORTATION COMMAND

The CDRUSTRANSCOM is the DoD’s single manager for transportation (for other than Service unique or theater-assigned transportation assets) and serves as the joint deployment and distribution coordinator to oversee the overall effectiveness, efficiency, and alignment of DoD-wide distribution activities. USTRANSCOM utilizes three multi-service components: AMC from the USAF, the US Army’s Military Surface Deployment and Distribution Command, and the US Navy’s Military Sealift Command. The USTRANSCOM operations directorate receives, processes, and sources all transportation requests that are not the responsibility of CCDRs with a defined AOR. When structuring requirements for airlift, supported CCDRs and supported Service or functional components request the transportation mode and source to optimize strategic lift assets. USTRANSCOM may advise alternative modes or source recommendations, but the supported CCDR has the final authority for determining the mode source. USTRANSCOM prioritizes competing CCDR requirements using the JCS priority system. Requirements that should move by air, based on mission timing or security, are tasked to AMC. The USTRANSCOM Deployment Distribution Operations Center (DDOC) forms partnerships with supported CCMD JDDOCs to exercise centralized control and provide the JFC with responsive, capable, and flexible strategic mobility forces.

Airpower can support more than one CCDR at a time. Therefore, the CDRUSTRANSCOM normally retains OPCON of intertheater air mobility assets due to their global mission and nature. A support relationship is typically established between USTRANSCOM and other CCDRs. Intratheater airlift and theater refueling assets may be attached to a joint force, with OPCON normally delegated to the appropriate Service component commander (usually the COMAFFOR).

AIR MOBILITY COMMAND

AMC is the designated lead command for USAF air mobility issues and works closely with other CCMD MAF. In this capacity, AMC develops weapon system standards and integrates C2 processes for the entire GME.

Generally, all AMC forces are assigned to USTRANSCOM. AMC is both a USAF major command (MAJCOM) and the operational USAF Service component command to USTRANSCOM. As such, both the operational and administrative branches of the chain of command intersect with the COMAMC.¹⁹ Within the administrative branch, COMAMC organizes, trains, equips, and sustains combat forces to enable the USAF's rapid global mobility function. In the operational branch, COMAMC is the COMAFFOR that presents USTRANSCOM-assigned forces to meet CDR assigned global air mobility missions and tasks. Air Force's Transportation (AFTRANS) refers to AMC in its role as the air component of USTRANSCOM. The COMAMC is normally delegated OPCON of assigned forces and exercises C2 through the 618 AOC.

AMC also plans, coordinates, and manages the CRAF program. When the CRAF is activated, relevant carrier information and mission changes are directed by AMC via USTRANSCOM. AMC monitors commercial carrier mission execution via the 618 AOC. Commercial carriers retain control of crews, aircraft, and support.

18TH AIR FORCE (18 AF)

18 AF is AMC's sole numbered Air Force. 18 AF is not an operational command, rather, 18 AF functions within the administrative branch of the chain of command to execute command responsibilities related to Service administration as directed by Title 10, United States Code (USC) through SecAF, CSAF, and COMAMC for assigned wings and organizations.

US AIR FORCE EXPEDITIONARY CENTER (USAF EC)

The USAF EC is a numbered Air Force-equivalent center tasked with organizing, training, and equipping CR forces, expeditionary combat support training, en route and installation support, and building partnership missions. The USAF EC is not an operational command. Rather, the USAF EC functions within the administrative branch of the chain of command for the execution of command responsibilities related to Service administration as directed by Title 10 USC through SecAF, CSAF, and COMAMC for assigned wings and organizations. Additionally, the USAF EC provides direct oversight for the GAMSS, joint base installation support, worldwide CR, and builds partnership capacity mission sets within the GME.

618TH AIR OPERATIONS CENTER

The 618 AOC is the C2 center and operational execution arm of AMC. Like other AOCs, the 618 AOC connects the operational and tactical levels by planning, tasking, executing, and assessing air operations. The 618 AOC's C2 capability enables AMC to fulfill USTRANSCOM's responsibility to conduct globally integrated mobility operations, lead the broader Joint Deployment and Distribution Enterprise, and provide enabling capabilities that project and sustain the joint force in support of national objectives.

To complete AFTRANS missions for USTRANSCOM, the 618 AOC is organized as a functional AOC with global responsibilities. Therefore, the 618 AOC is uniquely structured to meet mobility mission requirements that routinely cross multiple CCMDs. The 618 AOC

¹⁹ For additional information on the branches of the chain of command, see JP 1 Vol 2, *The Joint Force*.

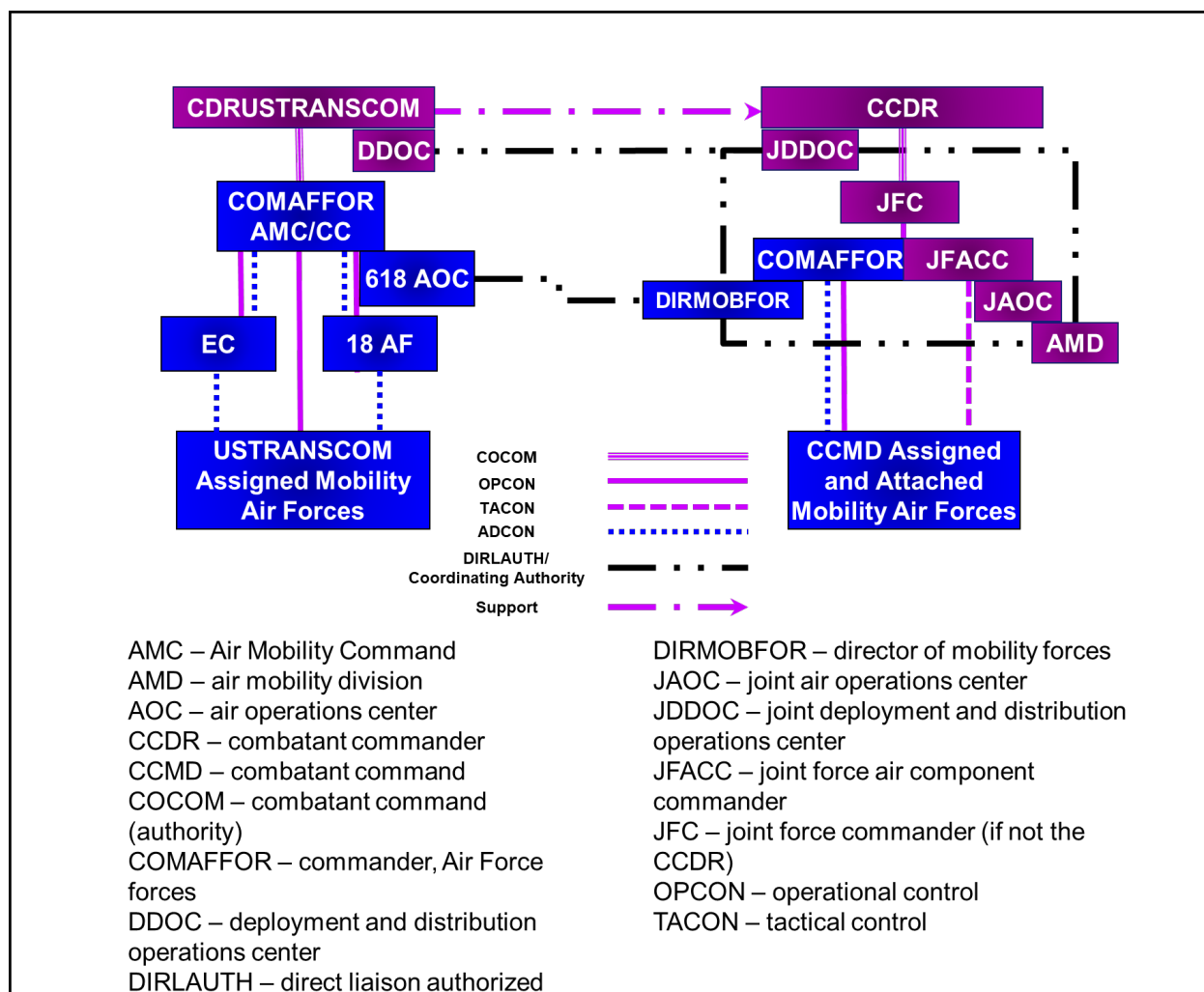
primarily interacts with other CCMDs through their corresponding AOC's DIRMOBFOR. For CCMDs without a defined AOR, the 618 AOC plans, tasks, executes, and assesses intertheater and intratheater air mobility requirements. For CCMDs with defined AORs, the 618 AOC has specific expertise in planning and integrating intertheater mobility with intratheater missions controlled by the local theater AOC. As each theater AMD has differing levels of staffing and air mobility assets, the 618 AOC may provide support to ensure missions meet CCMD objectives.

COMBATANT COMMAND AIR COMPONENTS

A CDR with a designated geographic AOR exercises COCOM over assigned and attached forces and normally delegates OPCON of Air Force forces to the theater air component commander. The air component commander exercises OPCON of assigned and attached USAF mobility forces and TACON of air mobility forces made available for tasking through the theater's AOCs. The AOC provides operational-level C2 on behalf of the air component commander. A theater air component commander may designate a DIRMOBFOR as a coordinating authority between the 618 AOC, the theater AOC's AMD, and joint task force-specified C2 nodes to meet all validated intertheater air- mobility requirements. The air component commander, AOC director, and DIRMOBFOR should ensure that intratheater and intertheater MAF effectively communicate.

Lessons Learned in Command Relationships (COMREL)

The speed, range, and flexibility of airpower necessitates clearly defined COMREL and unambiguous command authorities for effective C2, especially during the chaotic initial stages of execution. The following DIRMOBFOR and C2 diagrams represent extant best practices. However, these relationships may require adaptation in the early stages of crisis or conflict. For example, recent operations to resupply Ukraine following the Russian invasion in 2022 and respond to the attack on Israel in 2023 both employed a general officer with DIRLAUTH and coordination authority to directly liaise between the CDRUSCENTCOM, CDRUSTRANSCOM, COMAMC, and the 618 AOC. In both cases, this unique level of coordination was necessary for approximately the first 10 days of conflict. This adaptation rapidly secured air mobility support in dynamic and evolving situations until normal command relationships were prepared to assume responsibility.



Mobility Air Forces Command and Control

AIR OPERATIONS CENTERS

The air component commander's AOC provides C2 of air operations to execute all requirements established by the JFC. AOCs are responsible for planning and executing assigned missions. AOCs execute C2 of CCMD assigned or attached MAF. C2 is exercised through the specification of OPCON or TACON, which may provide the authority to approve waivers (e.g., aircrew, aircraft equipment, and acceptable levels of risk) for operational missions.

Control is distributed to AOCs or other designated C2 agencies (operational level); whereas mission execution is accomplished through the air mobility wings (tactical level). AOCs communicate directly with air mobility wings command posts, aircrews, en route bases or locations, and intermediate staging locations during all mission phases. All AOCs can plan, coordinate, task, execute, and assess air mobility missions under their C2. Due to mission sensitivity, distinguished visitor missions supported and executed by the 89th Airlift Wing are under the C2 of that wing and are monitored by the 618 AOC.

AIR OPERATIONS CENTER'S AIR MOBILITY DIVISION

The AMD plans, coordinates, tasks, and executes theater air mobility missions. The AMD tasks intratheater MAF through wing and unit command posts and through applicable deployed C2 nodes. The AMD works for the AOC commander or director and coordinates with the DIRMBOFOR, the JDDOC, and the 618 AOC. The AMD produces airlift plans and AR requirements in the AOC's air operations directive, master air attack plan, air tasking order (ATO), ACO, and SPINS. The AMD is normally comprised of four core teams.

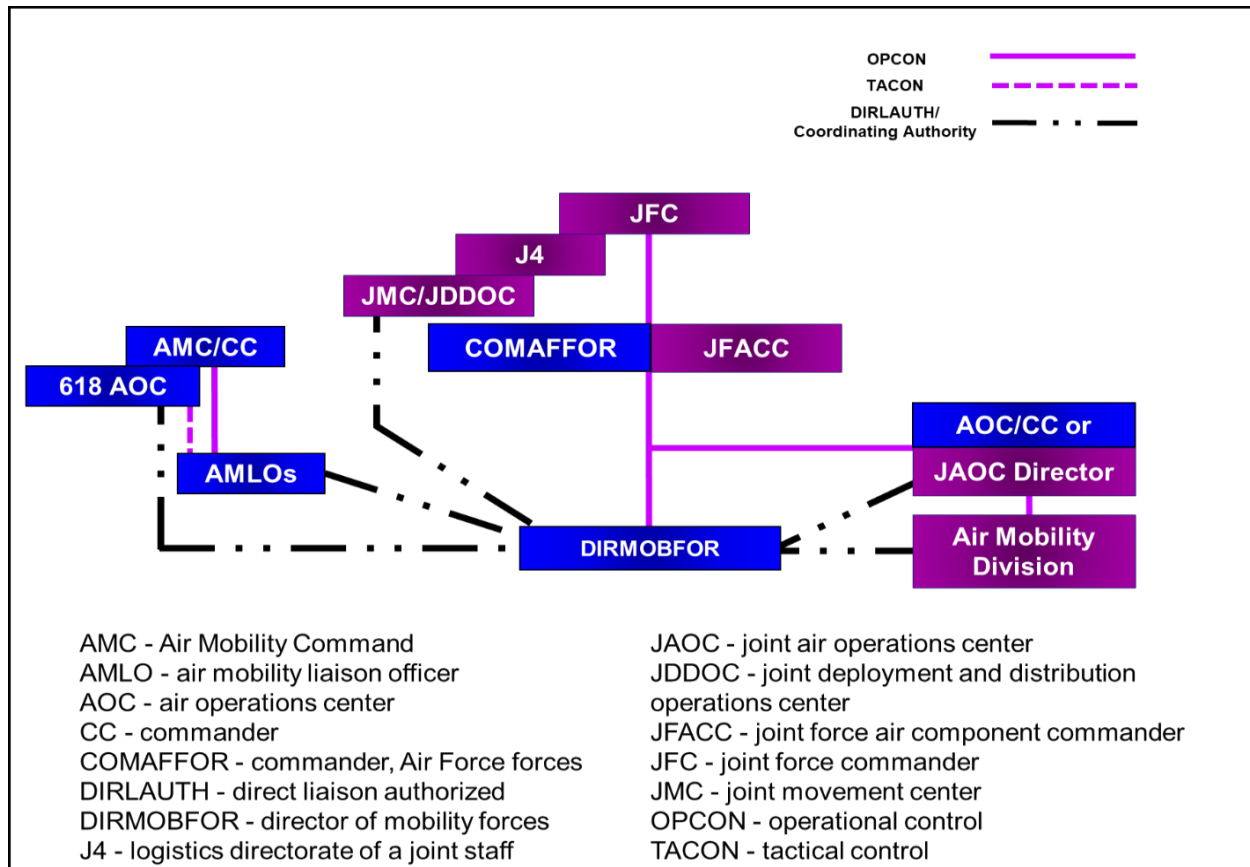
- ★ **Air Mobility Control Team (AMCT).** The AMCT serves as the centralized source of theater air mobility C2 during mission execution.
- ★ **Airlift Control Team (ALCT).** The ALCT provides intratheater airlift functional expertise to plan, coordinate, manage, and execute intratheater airlift operations.
- ★ **Air Refueling Control Team (ARCT).** The ARCT plans, tasks, schedules, and executes AR missions to support theater air operations or to support strategic airbridge and global strike missions within the AOR.
- ★ **Aeromedical Evacuation Control Team (AECT).** The AECT provides operational planning, scheduling, and execution of intratheater AE missions and develops plans and strategies to optimize intratheater AE force lay-down in support of joint patient movement operations.

A fifth team may be established if required.

- ★ **Air Mobility Support Team (AMST).** The AMST may be established to incorporate key staff personnel including C2 systems, intelligence, and tactics to support the AMD chief and the four AMD teams.

DIRECTOR OF MOBILITY FORCES

The DIRMBOFOR is normally a senior experienced air mobility officer familiar with the AOR. The air component commander may appoint a DIRMBOFOR from within the air component or request one from AMC. Normally, the DIRMBOFOR is attached to the air component commander's special staff and should be given appropriate liaison authorization and coordinating authority. The DIRMBOFOR exercises coordinating authority to integrate intertheater air mobility support provided by USTRANSCOM and serves as the COMAFFOR's designated coordinating authority for intertheater air mobility operations with all commands and agencies, both internal and external to the joint force.



DIRMOBFOR Coordination

Specifically, the DIRMObFOR coordinates with the air component staff, theater AOC, 618 AOC, CCDR's logistics directorate (J-4), and the joint movement center or JDDOC to expedite the resolution of air mobility issues. Additionally, the DIRMObFOR provides advice to the AMD to enhance the timing and tempo of AOC operations. The DIRMObFOR should be collocated with the AOC to facilitate AMD coordination with other AOC divisions.²⁰ The AMD remains under the control of the AOC director. If a DIRMObFOR is not appointed, the AOC's AMD chief fulfills DIRMObFOR duties.

DIRMOBFOR's duties include:²¹

- ★ Aiding theater integration and coordination of the multinational air mobility plan.
- ★ Coordinating with 618 AOC to ensure intertheater air mobility support requirements are met.
- ★ Ensuring USTRANSCOM intertheater operations are deconflicted with intratheater air operations and integrated into the air assessment, planning, and execution processes.
- ★ Integrating intertheater air mobility capability provided by USTRANSCOM.

²⁰ For additional information on AOCs, see Air Force Tactics, Techniques, and Procedures (AFTTP) 3-3.AOC, *Combat Fundamentals-Air Operations Center*, and JP 3-30, *Joint Air Operations*.

²¹ For additional information on the DIRMObFOR, see AMCI 10-202V7, *Director of Mobility Forces (DIRMOBFOR) and Air Forces Transportation Liaison Officer (AFTRANS LNO) Policy and Procedures*.

- ✪ Serving as a member of the joint logistics coordination board led by the CCDR's J-4.
- ✪ Serving as the air component commander's senior air mobility officer point of contact to the theater JDDOC, AMC, 618 AOC, CCDR's J-4, and USTRANSCOM deployment and distribution operations center for intertheater airlift movements.

AIR RESERVE COMPONENT FORCES

Air Force Reserve Command (AFRC). AFRC air mobility resources mobilized for USTRANSCOM missions, or operating outside of the US should be in Title 10, USC status. They are placed under CDRUSTRANSCOM's combatant command (command authority) (COCOM). CDRUSTRANSCOM normally delegates OPCON over AFRC forces to the assigned COMAFFOR, the COMAMC. ADCON for personnel and administrative support usually remains with AFRC. When AFRC forces are activated and allocated to a CCDR with a defined AOR, the CCDR gains OPCON (which the CCDR will normally then delegate to the air component commander), and the air component commander may exercise some specific elements of ADCON, as required to carry out the operational mission. The specific elements of ADCON forwarded and those retained by the parent organization should be specified.

Air National Guard (ANG). Special considerations exist in determining the command relationships for the ANG. ANG units operating outside the US should be in Title 10, USC status. As the air component commander to CDRUSTRANSCOM, the COMAMC exercises OPCON of applicable CONUS-based ANG forces when they are federalized under Title 10, USC. ANG forces based OCONUS are under OPCON of the CCDR's theater air component commander when federalized. CONUS-based ANG forces transferred to a CCDR with a defined AOR by the SecDef via the GFMAP or RFF process are also normally attached with a specification of OPCON to the CCDR. ADCON for discipline, personnel support, and administration is retained by the ANG Readiness Center. However, if mobilized, ADCON is transferred to the gaining MAJCOM. ANG forces may be involved in training for the federal mission without being activated to Title 10 status. Command of ANG forces operating in Title 32 status remains with the state authorities.

Guard members fall under the command authority of the adjutant general (TAG) of their state and therefore, their governor. When ANG members are involved in training for the federal mission (Title 32 status) the gaining MAJCOM commander may exercise training and readiness oversight, but not command. If Guard members operate in Title 32 status outside of their state, but within the CONUS, command authority will remain with the TAG, but will be subject to any coordinating authority, or state-to-state agreements. If no pre-negotiated agreement exists, responsibilities such as support, and FP should be coordinated between applicable commanders.

OTHER COMMAND AND CONTROL RELATIONSHIPS

Homeland Operations. Domestic emergencies often call for the use of air mobility assets to support civil authorities. The purpose of DSCA is to save lives, prevent human suffering, and mitigate property damage. DoD air mobility capabilities far exceed state and local capabilities, making them a crucial piece of operational planning in response to civil crises. DoD can provide specialized skills and assets that can rapidly stabilize and

improve a situation in support of, and in coordination with, civil authorities to meet the needs of the populace. CCDRs prepare plans to support the employment of Title 10 DoD forces providing DSCA, in accordance with the National Response Framework. DSCA command structures and requirements are unique and call for specialized support from the MAF. DSCA does not include ANG forces formally operating under C2 of the governors of their respective states unless they are operating under Title 32 authorities.²²

Nuclear Operations. MAF contribute to US strategic deterrence and the USAF's nuclear operations function by supporting United States Strategic Command (USSTRATCOM) and other CCMDs worldwide. AMC provides MAJCOM oversight and develops policy for three nuclear missions: nuclear airlift support, nuclear C2, and nuclear AR support. Tankers conduct AR to provide rapid global mobility for the bomber force and enable continuous airborne operations for nuclear command, control, and communications platforms. The AMC Nuclear Execution Force is comprised of tankers, mobile support teams, tanker command posts, and tanker crisis action teams. Once generated, the TACON of tankers passes from CDRUSTRANSCOM to CDRUSSTRATCOM.²³

²² For additional information on homeland operations, see AFDP 3-27, *Homeland Operations*.

²³ For additional information on nuclear operations, see AFDP 3-72, *Nuclear Operations*.

CHAPTER 4: PLANNING

USTRANSCOM and AMC develop, analyze, and issue planning guidance for operational plans. Such plans balance requirements, capacity, and priorities to adjust the air mobility enterprise to meet the needs of CCDRs and other airlift users in accordance with the JCS priority system and USTRANSCOM allocation. AMC planners consult with CCDRs on the development of standing operation plans (OPLANs), OPLANs in concept format, and other concept plans to ensure the integration of air mobility operations into a JFC's operation.

Commanders and planners tasking air mobility aircraft should (in order):

- ★ Identify the requirements, consider multi-role employment, and prioritize movements.
- ★ Validate requirements and allocate the number and types of aircraft needed.
- ★ Task units and coordinate actions among the user, unit, and planners.
- ★ Schedule the movement process.
- ★ Assess the results through a review of the transportation effects.

FUNCTIONAL PLANNING CONSIDERATIONS

Each air mobility core function has specific planning considerations to maximize its effectiveness. A common consideration for all the functions is to consider multi-role employment opportunities and exercise realistic scenarios that challenge, test, and validate a unit's ability to fly, fix, and support air mobility operations in large-scale combat. Realistic exercises should incorporate all the core functions and train to objectives that are not regularly accomplished. In turn, these exercises generate best practices that generate new planning considerations and tactical procedures that increase the lethality of air mobility operations.

Maximum Endurance Operations in Exercise Mobility Guardian

In the summer of 2023, Air Mobility Command conducted exercise Mobility Guardian 23 (MG23). MG23 incorporated 70 mobility aircraft and more than 3,000 multi-national service members who exercised integrated airlift, air refueling, aeromedical evacuation, and air mobility support across the Indo-Pacific theater.

Air Force Lessons Learned identified best practices from MG23 involving the planning and implementation of Maximum Endurance Operations (MEOs) to enhance the air mobility surge into a theater. MEOs are characterized by extended sortie durations that increase mobility aircraft on-station availability and reduce response times in large theaters of operation. Incorporating MEOs as a functional planning consideration can provide more options for air component commanders who are generating air operations over extended distances.

MULTI-ROLE EMPLOYMENT

Recent exercises have demonstrated the significance and efficacy of multi-role tasking MAF aircraft equipped with new capabilities such as battle management communications and palletized delivery systems. The ability to re-role MAF assets supports the airpower tenets of flexibility and versatility by providing air component commanders additional means to achieve desired effects. Importantly, commanders and planners should be mindful of the additional planning considerations involved with employing multi-role capabilities, especially those that involve cross-CCMD support. Though physically present in an AOR, multi-role MAF assets require extensive coordination, command agreement, and prioritization prior to tasking.

Emerging Capabilities

MAF-enabled Battle Management. Due to their persistent airborne presence, worldwide reach, and redundant communications systems, MAF aircraft, and GAMSS locations may augment or enhance traditional C2 systems through innovative battle management in contested, degraded, or operationally limited environments, especially in early operational phases when traditional C2 assets have not yet arrived or are otherwise unavailable. MAF-enabled battle management may critically enable joint force maneuver to gain positional advantage.

Palletized Delivery Systems. The use of palletized delivery systems provides a means to deploy additional capabilities using MAF aircraft such as long-range strike, electromagnetic warfare, ISR, and others. Employment of palletized delivery systems create dilemmas for adversaries and asymmetrical advantages for the joint force.

AIRLIFT PLANNING

Airlift planning is designed to sustain critical MAF operations in any environment. Airlift planners should consider aircraft capabilities, mobility planning factors, cargo characteristics, cargo and/or passenger quantity, aircrew limitations, overflight restrictions, CBRN risk, and en route infrastructure to effectively support operations.

Deployment and redeployment of transportation requirements are planned using the Joint Operations Planning and Execution System (JOPES). JFCs validate the intratheater TPFDD to the theater AOC's AMD (if assigned) for planning and execution, while intertheater TPFDD requirements are sent to USTRANSCOM for planning and execution. The TPFDD details the CDR's deployment and redeployment priorities, enabling air mobility planners to build air movement plans.

- ✦ **Intertheater Airlift.** During deployment operations, intertheater airlift requirements, while significant, are, to a large degree, predictable. CDRs request intertheater airlift to support deployment, sustainment, and redeployment operations through the joint planning process. Such requirements are normally identified in the TPFDD associated with a particular OPLAN or operation order (OPORD). Airlift planners should ensure

sufficient air mobility support is available at each APOD to offload and process passengers and cargo.

- ★ **Intratheater Airlift.** Intratheater airlift is conducted by CCCR assigned and/or allocated MAF aircraft. Air Mobility Divisions are tasked with validated logistics requirements from the JDDOC in accordance with CCCR priorities. AMDs match the validated requirements to available aircraft and task airlift aircraft to fly the tasked mission with the assigned cargo.

AIR REFUELING PLANNING

Tankers should be matched to receiver aircraft to prioritize mission accomplishment while balancing the efficient use of available fuel and resources. AR capability can be increased by judicious use of reliability tankers, assigning individual tankers to multiple receivers, and ensuring receiver requests accurately reflect mission requirements. Considerations for steady-state allocations follow the same conceptual process as contingency allocations. When developing tanker allocations, planners should consider receiver aircraft compatibility (boom or drogue), total offload requirements versus airborne tanker dispersal (booms in the air), fuel grades at commercial or host locations, fuel burn rates, receiver altitude limitations, and SOF or sensitive reconnaissance aircraft requirements.

Proper AR planning maximizes mission accomplishment with limited resources. Efficient tanker support plans deliver more fuel per sortie, allow strike packages to loiter longer and strike deeper, and enhance air superiority. Effective AR may reduce tanker requirements or rededicate assets to increase combat effectiveness.

AEROMEDICAL EVACUATION PLANNING

AE planning requires the integration of joint and Service-specific capabilities into the JFC's concept of operations. TAES managers are an integral part of the airlift planning team and should build appropriate AE support into the en route care structure that spans from the initial point of in-theater casualty through treatment at CONUS-based medical treatment facilities. Medical planners should interface with airlift and logistics planners to maximize patient care and medical capabilities along airlift routes.

Common airlift routes should be identified to establish potential AE plans. There are several factors to consider when planning the en route care capability, including theater evacuation policy, matching patient requirements with mobility aircraft restraints, airfield suitability, weather/climate considerations, potential threats, fly-away security forces, BOS, and communication crew support.

A TAES manager should be incorporated into the AOC's AMD to outline, develop, and coordinate theater AE plans along airlift routes, including the number and location of AE assets needed to support operational requirements. Additional AMD augmentation support may be requested from AMC/A3C using the RFF, request for capability process, or through reachback. Additional support may be available from the AOC's ARC-aligned augmentation unit.

A senior officer with extensive AE experience and knowledge of plans and operations should be considered for the chief of the AECT. This individual directs the actions of the

AECT and offers AE planning and execution guidance to the AMD chief. The AECT coordinates with the air component staff and joint theater medical planners to integrate AE support into the theater patient movement plan and ensure TAES operational issues are addressed. The TAES manager collects situation reports and maintains a real-time status of TAES capabilities (equipment and personnel). The TAES manager coordinates logistics support for, and movement of, TAES equipment and personnel to ensure proper laydown, phasing, and sequencing of AE forces. Air components without an assigned AE planner should contact AMC A3/5X/SGX for urgent AE planning support including patient movement items.

AIR MOBILITY SUPPORT PLANNING

Successful deployment and employment of US forces depend on accurate planning of US logistics support and sustainment systems. As an air mobility enabling capability, GAMSS forces are integrated into the initial deployment flow for effective steady-state or contingency planning. These forward forces manage the deployment of intertheater and intratheater assets for USTRANSCOM and supported CCDRs and, when complete, the redeployment of US forces.

Several specific planning factors have varying degrees of influence on MAF success. Some planning factors are throughput-critical—key factors in the successful throughput of forces and materiel at a given location. Included in this category are manpower; crash, fire, and rescue services; MHE; airfield capabilities; petroleum, oils, and lubricants (POL); and airfield MOG capacity. These factors determine the maximum number of aircraft and amount of cargo or passengers that can be handled at a location. Coordination by planning staff should include all combat support-related capabilities to ensure installations are capable of supporting mission elements. All factors are interrelated and should not be considered in isolation. Coordination between theater planners and air mobility support forces ensures adequate force support.

GENERAL PLANNING CONSIDERATIONS



“We must become a force that relishes chaos and grows stronger in an uncertain future environment.”

-- **General Mike Minihan, Commander, Air Mobility Command**

Air mobility planning considerations aid in concept and plan development for operations in dynamic environments across the competition continuum. The complexity of planning increases in highly contested environments while the demand for air mobility operations changes based on geographical requirements. Geographically isolated environments generally require air mobility as the primary source of supply. In other areas, air mobility operations act as a force multiplier when used in conjunction with multimodal ports and hubs. Regardless of the geographic area, MAF are inherently high-demand and low-density assets. The capacity of air mobility is often insufficient for the requirements

levied by the joint force. Therefore, air mobility considerations are crucial to effective planning.²⁴

POL AND ENERGY PLANNING CONSIDERATIONS

POL availability and security are crucial elements of successful air mobility planning. Every effort should be made to conserve and protect this critical resource. Among other considerations, supply constraints, costs, and potential adverse adversary action should be built into branches and sequels of course-of-action (COA) development to mitigate impacts on fuel supply. POL planning and requirements should include the amount needed for both aircraft and ground equipment, with an emphasis on reducing ground times. Planners should consider POL storage capacity, fueling system condition and type, dispense rates, fuel grades, and POL acquisition, either from the host nation or by resupply. Aircraft fuel is usually a limiting factor and should be a primary focus, especially during dispersed operations.

Ideally, fuel should be readily available at transportation nodes and air cargo hubs. Lack of fuel at enduring or contingency locations has a negative impact on cargo throughput as aircraft displace cargo with fuel. Operations at contingency locations should be limited in scope and duration or a reliable source of aviation fuel should be obtained for large-scale or extended operations.

Tanker bases should be located as far forward in the operational area as possible while remaining tethered to a robust and secure fuel source. Forward basing should also balance the risk of increasingly contested operating areas while understanding that distant basing limits offload, increases flight time, and results in greater operational fuel burn by MAF aircraft. Lack of fuel sources may also increase the number of tankers and crews needed to support the offload requirements and multiply the number of bases and MAF support needed in the operational area, thereby further expanding the logistics footprint and mission cost.

HOST NATION SUPPORT

The importance of partner nation support to air mobility should not be underestimated. Deployed air operations rely on host nation support for access, basing, and overflight negotiated and coordinated by the CCDR and approved by the Under Secretary of Defense for Policy (USD[P]). Host Nation support can reduce the demand for deployed US personnel, equipment, and vehicles. Legal advisors should be consulted to determine what agreements and treaties exist and whether there is a status-of-forces agreement (SOFA) in place. The CCDR's J-4 and Air Force Forces A-4 should be consulted for acquisition, cross-servicing, and mutual logistics support agreements that may exist. SOFAs normally include the status of and entry requirements for personnel, as well as operating rights and responsibilities, and may include waivers of duties, taxes, and certain fees. Planners should account for levels and specific details of host nation support. Among other concerns, such support is crucial to ensure the availability of POL due to

²⁴ For additional information on tactical level planning considerations, see AFTTP 3-3.IPE, *Integrated Planning and Employment*.

high consumption rates. Inadequate planning and failure to provide required augmentation can result in significant roadblocks to mission accomplishment.

Air advisors can assess and improve host nation capabilities to support MAF operations. This can take years of preparation and MAF planners should coordinate with CCDR planning and operations directorates to prioritize MAF requirements and air advisor operations in CCMD plans.

OPERATIONAL CONTRACT SUPPORT

Leveraging commercial support is an essential element of air mobility operations and Operational Contract Support (OCS) is the multi-functional staff process that ensures commercial support is fully integrated into air mobility planning. OCS goes far beyond air mobility related commercial contract airlift. OCS provides a framework to harness potential commercial capability and integrates it into plans, orders, exercises, and multinational operations. It allows commanders and staffs to make timely, risk-informed decisions on the best sources for procuring supplies, services, and construction through a contract and enables requirement owners and contracting offices to manage and assess the resultant contracted support. OCS is not simply a means to acquire support when organic options are not available or feasible but rather can often be considered as a first option. Virtually all USAF functional areas have potential commercial requirements to support their mission areas, and many have policy driven OCS responsibilities. When carefully planned and executed, OCS mitigates inherent commercial risks (e.g., vendor threats and reliability concerns), frees up military forces for other missions, and mitigates force-flow constraints to free up airlift for other critical assets that cannot be contracted. The AMC/A4 is the focal point for OCS and can provide expertise to ensure effective commercial support is provided to air mobility operations.

ACCESS

Access to theater airspace, airfields, and drop zones throughout the world presents a major limiting factor to air mobility operations. Air mobility operations depend on access to facilities and infrastructure. Capabilities at various airfields may differ based on location and type. Austere airfields may be limited in the following ways: runway condition and size, taxiway systems, ramp space, fuel (resupply, storage, quality, and handling capabilities), security, MHE, marshaling and storage capability, aircraft servicing, maintenance, navigation aids, weather observing sensors, and communications. Additionally, airdrop operations require complex planning to ensure drop zone access. Enemy defenses, flight routing, terrain, cargo considerations, and aircraft limitations should be considered for drop zone selection.

AMC, on behalf of USTRANSCOM, maintains a continuously updated global database of airfield information in the Global Decision Support System (GDSS), including an individual assessment for every location used by air mobility aircraft. GDSS should be updated as a part of the expeditionary site survey planning process to ensure current airfield information is accurately captured. Airfield survey information is also included in GDSS, appended to suitability assessments. Theater planning organizations should maintain airfield survey information for theater bases in addition to GDSS data.

COMMUNICATIONS

Air mobility missions should be flexible and responsive to the users' requirements. Because of their extended loiter capacity, airborne tankers and airlifters can be redirected if their primary mission is changed or canceled. To accomplish this, AOCs should flight follow air mobility aircraft. This is normally accomplished by an AMD in theater or the 618 AOC if outside the theater. In contested communications environments, operational requirements and communication capabilities may dictate that another airborne or ground control element relay a new tasking. Bolstered communications security procedures and mandated low emissions control environments may make it difficult for control elements to maintain contact with airborne assets. Re-tasking procedures and frequencies should be explained in SPINS or the ACO to ensure coordination between aircrews and C2 elements. Regardless of command relationships, aircrew should adhere to theater operational procedures normally found in SPINS. Planners should consider the challenges air mobility operations will face in a contested environment and have appropriate branch plans to consider broken lines of communications or rapidly changing basing considerations.

BASE OPERATING SUPPORT (BOS)

Except in the case of self-sustaining short-term CR forces, BOS for deployed forces enhancing the GAMSS should be provided by the CCCR's Service component responsible for the airfield or by the host nation when no component has a presence. When insufficient host base BOS exists, deploying air mobility support forces are normally augmented by the appropriate BOS unit type codes drawn from the command or USAF as a whole. The limited BOS forces organic to CRWs are sized solely for supporting themselves and are not intended to be a source of BOS capacity for supporting non-contingency forces. Any tasking of these forces separate from the CRW has the potential to negatively impact CR responsiveness and operational success.

AIRSPACE CONTROL

The use of air mobility in any theater should be integrated into any civilian or international airway control system through the ACP. Air mobility planners should coordinate with the airspace control authority's staff and obtain diplomatic clearances to ensure airlift and AR activities comply with all routes and procedures through any area they may transit. The nature and intensity of the air operation may require the establishment of specific air traffic corridors and AR tracks. Corridor routing is coordinated among the ACA, planning, and execution functions of the AOC (such as the DDOC), the AMD, and the DIRMFOR. These individuals and organizations should consider all theater operations and threats to air mobility forces. The AMCT provides deconfliction for airlift and AR intratheater operations and the AMD provides the coordination of intertheater assets entering the operational area. It is the responsibility of the ACA to ensure airspace management of airlift operations is sufficient to provide effective and safe operations.

DIPLOMATIC CLEARANCES

Diplomatic clearances include aircraft overflight and landing rights, communications connection approval, personnel visas, and other entry requirements. Customs, immigration, and quarantine requirements (or waiver thereof) can also be critical. TPFDD

flow cannot occur without appropriate clearances. Diplomatic clearances may require days or weeks of advance notice to corresponding state governments, and impact footprint, throughput, FP, and operational success. Diplomatic clearances should be received before the execution of a TPFDD or deployment order (DEPOD).

LEGAL ISSUES (PRINCIPLES OF INTERNATIONAL LAW)

Global air mobility operations are governed by international and domestic laws. International law governs the rights, privileges, and immunities of aircraft. Privileges and immunities differ depending on the status of the aircraft (e.g., “state” or “civil”). Military aircraft are state aircraft and are therefore instruments of a sovereign under law, custom, and practice. Military aircraft are not subject to search, seizure, and inspection and are not subject to air navigation, overflight, or similar fees for transit, nor landing and parking fees (or other use fees) at foreign government airports. Aircrews, planners, and mission managers for OCONUS sorties should consult the DoD Foreign Clearance Guide for country-specific information. Additionally, aircrew and mission planners should abide by applicable theater guidance.

MEDICAL

The global reach laydown (GRL) team provides medical capabilities designed to reduce mission impacts from disease and non-battle injuries during contingency operations. They may also provide limited medical support to their supported units. GRL teams and their associated equipment packages deploy with CR forces to assess risks associated with environmental and occupational health hazards for deployed personnel while establishing potential MOBs in forward deployed locations.

MULTIMODAL PORTS AND HUBS

Planners should be aware of multimodal ports when designing airlift plans. Ninety percent of intertheater cargo goes by sea, often with intratheater airlift as the final segment. Multimodal hubs act as a force multiplier that enables maximum efficiency for high-demand airlift assets and provide resiliency of logistics through alternate delivery channels. The airlift supply structure should be aligned with existing multi-modal ports.

WEATHER

Weather effects on air mobility operations present ongoing challenges. Incorporating the impact of climate and weather effects on air mobility operations should be part of planning for all activities. For example, weather greatly reduced the airlift capability for Bosnia in 1996, the tanker capability in Kosovo in 1999, and the airlift in Kuwait during Operation IRAQI FREEDOM.²⁵

INTELLIGENCE

Intelligence is essential to MAF operations, mission planning, and FP. Intelligence personnel provide information about adversary order of battle, disposition of forces, vulnerabilities, capabilities, intent, and probable COAs that could impact operations. Intelligence personnel also help develop Priority Intelligence Requirements (PIRs) and

²⁵ For additional information on weather, see AFDP 3-59, *Weather Operations*.

Essential Elements of Information (EEIs) that satisfy Commanders' Critical Information Requirements. PIRs can include, but are not limited to:

- ★ Adversary information operations.
- ★ Air operations threats.
- ★ CBRN threats.
- ★ Cyber threats.
- ★ C2 threats.
- ★ Electromagnetic threats (including directed energy).
- ★ Ground operations threats.

The MAF operates in a variety of threat environments. These threat environments include state and non-state actors, conventional and non-conventional military forces, insurgents, terrorists, hostile populaces, and severe weather. In a contested environment, air mobility planning should address the need for suppression of enemy air defenses, fighter escort, and threat warning. Planners will utilize intelligence to accurately characterize a threat environment to ensure mission success.

Joint Intelligence Preparation of the Operational Environment (JIPOE). Intelligence personnel conduct JIPOE to inform the JFC about threats and other aspects within the operational environment. JIPOE information is used by MAF planners because it includes a holistic view of the physical domains (air, land, maritime, and space), the information environment (which includes cyberspace), and the electromagnetic operational environment. Included within these domains and environments are threat and friendly political, military, economic, social, information, and infrastructure (PMESII) systems, subsystems, objects, and affiliated attributes, as well as their relationships and interdependencies, which are relevant to MAF operations across the globe.²⁶

Intelligence Preparation of the Battlespace (IPB). In comparison to JIPOE, IBP is more specifically designed to support the individual operations of the component commands and is tailored to specific adversary threats that MAF may encounter.

Threat Analysis and Risk Management. Threat analysis is necessary at each echelon of planning. AMC Mission Assurance Working Group—Air (MAWG-A) and theater threat working groups (TWGs) are the air mobility focal points for coordinating global and theater threat analysis and for developing recommendations to mitigate threats and vulnerabilities, provide risk assessments, and make policy decisions. MAWG-A and theater TWGs conduct annual and semi-annual country and airfield reviews of threats to operations that establish baseline risks, set risk assessment production requirements, and determine minimal FP recommendations. They also monitor threat environment changes; conduct risk analysis to support new operations, missions, and requirements; and review daily OCONUS missions for new or emerging FP concerns. Assessments and recommendations are shared among the MAWG-A and theater TWGs, with the ultimate

²⁶ For additional information on JIPOE, see JP 2-0, *Joint Intelligence*.

goals of achieving the AMC and theater commanders' acceptable level of risk and protecting MAF and CRAF crews, aircraft, passengers, cargo, and air mobility support forces for global operations.

Threats to Air Operations. Air mobility aircraft are vulnerable to both surface-to-air and air-to-air kinetic weapons because of their size, relatively slow speed, lack of maneuverability, large radar cross-section, limited onboard warning systems, and limited onboard defensive capabilities. MAF aircraft are also susceptible to electromagnetic attacks on radios, radars, and navigational systems. In addition, directed energy weapons like lasers can inflict destructive and disruptive effects on both aircraft and aircrew.

Threats to Ground Operations. Air mobility aircraft, aircrews, and support personnel are particularly vulnerable during ground operations. Aircraft and personnel may be exposed to the effects of kinetic fires from both direct and indirect fires, air-to-surface weapons, missiles, mines, and improvised explosive devices.

Threats to Command and Control. Mobility is highly reliant on the effective C2 of mobility forces. Global C2 of air mobility operations are vulnerable to non-kinetic fires (including electromagnetic warfare and cyber-attacks) as well as kinetic fires.

CBRN Threats. CBRN use against air mobility aircraft, aircrews, and support personnel limits options for the deployment, sustainment, and redeployment of forces. Planning factors for CBRN threat environment operations should include decontamination levels for aircrew and aircraft. Plan to avoid exposing aircraft to contamination by shifting airdrop locations or delivery locations to uncontaminated airfields or landing zones. Develop plans to decontaminate exposed aircraft to preserve these limited assets for future use. An exchange zone is a transload base, outside of the CBRN threat area, used to transfer cargo and passengers between a contaminated aircraft and an uncontaminated aircraft. Exchange zones minimize aircraft exposure at APODs contaminated by other aircraft.²⁷

INFORMATION WARFARE

Information Warfare (IW) is the Air Force term for military information capabilities provided to the air component commander to plan, execute, and assess missions in support of joint Operations in the Information Environment (OIE). OIE are military actions involving the integrated employment of joint information forces to affect drivers of behavior by informing audiences; and influencing foreign individuals, groups, populations, or automated systems whose capabilities or behaviors have the potential to affect the success of a campaign, operation, or tactical action; attacking and exploiting their information, information networks, and information systems; and by protecting friendly information, information networks, and information systems.²⁸

Air mobility operations have significant informational aspects since they are largely observable in the IE. USAF IW planners leverage these aspects to achieve tactical, operational, and even strategic effects across the competition continuum. These operations affect the perceptions and attitudes that drive behavior and decision-making

²⁷ For additional information on CBRN considerations, see the *Mobility Air Forces Countering Weapons of Mass Destruction Concept of Operations* (MAF Countering Weapons of Mass Destruction [CWMD] CONOPS, approved 5 Aug 19, AMC/A3/10).

²⁸ For additional information on information warfare, see AFDP 3-13, *Information in Air Force Operations*.

among allies, partners, adversaries, competitors, and relevant non-aligned actors. Finally, JFCs can use information related to air mobility operations to counter, discredit, and render irrelevant disinformation, misinformation, and propaganda.

THREAT MITIGATION

Emission control procedures, operations security, and communications security procedures may be used to mitigate some threats to air mobility operations. Further mitigation factors include defensive systems and aircraft armor to protect from surface-to-air threats, restrictions on transient overnight sorties, and restrictions for contracted and commercial flight operations. Additionally, specialized Security Forces fly away security teams, known as Phoenix Raven, may deploy with aircraft to provide organic protection during ground operations in high-risk areas.

THEATER BEDDOWN

Before determining employment concepts, planners should determine the theater beddown plan, including where air mobility assets plan to operate, and the restraints and constraints on those assets. Considerations in this area increase in complexity as the level of threat increases. Areas to consider include continuity of operations, resilient lines of communications, aircraft dispersal, and alert status.

GEOSPATIAL ENGINEERING

MAF-centric geospatial engineering support analyzes, describes, and visualizes the physical environment (terrain, airfields, landing zones, and drop zones) against mission activities to determine access and operational impacts. Geospatial engineering supports mobility planning and COA development by analyzing imagery, airfield infrastructure (e.g., aircraft rescue and firefighting capabilities; MHE; airfield capabilities and limitations; POL; airfield MOG capacity; cargo yard/storage capacity, etc.), and mission data to identify operational opportunities and constraints. It fuses information and knowledge with location context to reveal deeper insights and understanding about the environment that improves mission resilience and shortens commander decision cycles.

APPENDIX A: AIRLIFT MISSION TYPES

The following information briefly describes the types of airlift missions. Refer to JP 3-36, *Joint Air Mobility and Sealift Operations*, JP 4-01, *The Defense Transportation System*, and JP 4-09, *Distribution Operations*, for additional information concerning airlift missions.

AERIAL DELIVERY MISSIONS

Aerial delivery missions employ airdrop of personnel, equipment, and supplies into potentially hostile environments, locations lacking adequate access by other means, or when airland is insufficient to meet closure times. It requires specially trained crews, special equipment, and additional mission planning.

AEROMEDICAL EVACUATION

AE provides time-sensitive in-flight care of patients or casualties to and between higher levels of medical treatment facilities and care, using military airlift or contracted aircraft with medical aircrew trained specifically for this mission. Specialty medical teams may be assigned to work with the AE aircrew to support patients requiring more intensive en route care.

BANNER MISSIONS

Banner missions transport personnel and equipment required to support the President, Vice President, and other White House-directed movements. Actual transport of the President, other highly placed members of the government, and their immediate staffs is a function of EA missions. Banner missions require close coordination with the White House Military Office (WHMO).²⁹ These highest priority missions require aircrews to be postured in an enhanced alert status. See WHMO tasked missions are:

- ★ **PHOENIX BANNER** missions are special assignment airlift missions (SAAM) supporting the President of the United States.
- ★ **PHOENIX SILVER** missions are SAAMs supporting the Vice President of the United States.
- ★ **PHOENIX COPPER** missions are SAAMs supporting the WHMO that are not in support of the President or Vice President.

CHANNEL

Channel missions are taskings flown over fixed routes. By default, all channels are considered common-user distribution channels. Contingency channels support ongoing JCS-approved contingency operations. These channels can serve intertheater or intratheater needs. The majority of airlifted sustainment moves on channel missions. At the request of the supported CCCR, the CDRUSTRANSCOM can establish a special channel mission called air mobility express (AMX) to move critically needed items rapidly to an AOR. The supported CCCR may apportion part of the cargo space on AMX by pallet

²⁹ For additional information on Banner Missions, see AFI 11-289, *Phoenix Banner, Silver, and Copper Operations*.

positions to each component. For AMX missions to be effective, the supported CCCR should establish a theater distribution system to deliver express cargo from APOD to the destination.

EXECUTIVE AIRLIFT MISSIONS

The EA mission provides safe, comfortable, reliable, connected, and protected air transportation for national leadership in direct support of national security objectives while ensuring continuity of government. EA is a strategic mobility enabler dedicated to transporting the President, Vice President, Cabinet, Congress members, and other DoD-approved senior officials and foreign dignitaries.

At its core, EA is a critical C2 element for key leadership to ensure continuity of government and provide direction for nuclear forces. Therefore, the EA mission is “no-fail” and involves significant seasoning and a highly trained aircrew to execute its operations. As such, EA requires highly skilled support personnel, specialized aircraft that are configured with robust communications technology, and a deep understanding of the worldwide infrastructure necessary to support airborne connectivity.

EA uses specially configured and modified aircraft to conduct highly sensitive, often classified, worldwide, and theater missions enabling senior leadership to employ diplomatic, informational, military, and economic instruments of power. These special air missions (SAM) are primarily executed using VC-25, C-32, C-40, and C-37 aircraft. However, due to the high-demand, low-density nature of the mission, EA leverages aircraft including OSA, Service secretary, CCCR, and other mobility assets to fulfill time-sensitive senior leader requirements. User-specified communication requirements drive the need for the very latest capabilities and technologies. CDRUSTRANSCOM is the overall manager for the USAF’s SAM fleet.

Under the direction of the Assistant Vice Chief of Staff of the Air Force, the Headquarters Air Force (HAF)/A3M is the coordinating authority and serves as the chief of executive airlift scheduling activity (EASA) for EA missions originating in CONUS that are supported by USTRANSCOM assigned EA assets. HAF/A3M receives EA taskings from the WHMO, Office of the Secretary of Defense (OSD) Executive Secretariat, Senior DoD leadership, and OSD Legislative Affairs. EASA is the point of contact when collaborative scheduling is required for combat support mission aircraft and executive aircraft. EA missions originating OCONUS are supported by CCCR-assigned EA assets and coordinated through the theater AOC. HAF/A3M and the theater AOC’s AMD collaborate regarding asset availability to ensure required SAM users have the needed airlift to meet requirements.

Mission efficiency, effectiveness, and urgency require customized mission dispatch, execution, and visibility tools and C2 structure. CDRUSTRANSCOM is the overall manager for the SAM fleet and maintains OPCON of CONUS-based SAM assets through the COMAMC. OCONUS-based SAM assets are under OPCON to the respective CCCR who normally delegates OPCON to the theater air component commander. HAF/A3M and WHMO provide detailed mission planning. Execution and C2 for missions conducted with CONUS-based assets occur either in the unit itself or with the 89th Airlift Wing depending on the aircraft tasked. The theater AOC’s AMD performs these functions for

OCONUS-based assets. HAF/A3M and theater AMD collaborate regarding asset availability to ensure required SAM users have the needed airlift to meet requirements.

EXERCISE AND CONTINGENCY SUPPORT

Exercise and contingency missions involve deployment, sustainment, and redeployment via intertheater or intratheater airlift. Mobility assets participating in exercises enable units to gain additional training from unique mission scenarios and objectives that are not regularly accomplished during normal or contingency operations. Exercise and contingency operations are normally shaped by the CCDRs who develop a directive, OPLAN, or OPORD with specific logistical requirements for operations directed by the President, the SecDef, or the JCS.

RECOVERY OPERATIONS

Recovery operations are conducted to search for, locate, identify, recover, and return isolated personnel, human remains, sensitive equipment, or items critical to national security. These missions are often high-priority and closely watched because they require detailed coordination for ceremonies and handling as they seek to return human remains with the highest level of dignity and respect.

HUMANITARIAN ASSISTANCE

Humanitarian assistance operations provide relief to areas suffering from natural or manmade disasters to reduce human suffering, disease, hunger, or privation. These operations may be in support of the Department of Homeland Security, directed by the State Department or CCDR, or conducted in support of other national objectives.³⁰

JOINT AIRBORNE/AIR TRANSPORTABILITY TRAINING (JA/ATT)

CJCS-directed missions provide continuation and proficiency training to USAF air mobility providers and joint air mobility users. Missions may include airdrop, air assault, aircraft load training, AR, and Service school support. USAF MAJCOMs with air mobility forces manage their JA/ATT program.

NONCOMBATANT EVACUATION OPERATIONS (NEO)

NEO are directed by the Department of State or other appropriate authority, in conjunction with the DoD, whereby noncombatants are evacuated from foreign countries when their lives are endangered by war, civil unrest, or natural disaster to safe havens or the US. These missions are characterized by short timelines, increased coordination and oversight, and public affairs involvement.³¹

³⁰ See JP 3-27, *Joint Homeland Defense*, JP 3-28, *Defense Support of Civil Authorities*, and JP 3-29, *Foreign Humanitarian Assistance*, for additional information.

³¹ See JP 3-68, *Joint Noncombatant Evacuation Operations*, for additional information.

OPERATIONAL SUPPORT AIRLIFT

OSA provides a means of airlift for high-priority passengers and cargo with time, place, or mission-sensitive requirements, including validated AE patient movement. The DoD employs overarching guidelines for the approval and use of OSA. OSA supports authorized DoD travelers and cargo, which includes CCDR and Service component needs. CONUS requirements are validated and scheduled by the joint operational support airlift center (JOSAC) at USTRANSCOM. Flying units, via JCS- and Service-established procedures, indicate specific aircraft availability for Service, JOSAC, and AE missions. OCONUS requirements are authorized, validated, and scheduled in accordance with Service, CCDR, and component-defined processes. During contingencies, JFCs should use their OSA assets to supplement theater capability.

PRIME NUCLEAR AIRLIFT FORCE (PNAF)/EMERGENCY NUCLEAR AIRLIFT OPERATIONS (ENAO)

Airlift missions supporting nuclear weapons logistic operations are classified as PNAF or ENAO. PNAF missions involve specially qualified and certified crews operating under additional restrictions. PNAF provides the critical air transportation component of the planned logistical movement of nuclear weapons and related materiel positioned around the world and is necessary to facilitate international treaties and weapons life-cycle sustainment requirements. When directed, any airlift asset can augment this capability via ENAO to enable DoD custody of nuclear weapons during emergency operations. Cargo aircrew may be tasked at any time to airlift nuclear weapons. The amount of preparation time and degree of assistance received depends on the length of time available for the MAJCOM to move the weapons.

SPECIAL ASSIGNMENT AIRLIFT MISSION

SAAMs support movements requiring special consideration due to the number of passengers, weight or size of cargo, urgency of movement, sensitivity, or other valid factors that preclude the use of channel airlift. SAAMs support DoD users as well as other government agencies.

APPENDIX B: 618TH AIR OPERATIONS CENTER ORGANIZATION

The following describes roles and responsibilities within the 618 AOC:

Strategy Directorate (SRD). The SRD is responsible for providing recommendations regarding the strategic direction of the AOC. SRD conducts strategic and operational planning with AMC, and other CCMDs as required, for operations in execution or out to two years in the future. This planning includes operational assessment. SRD also functions as the primary organization for action officer liaison to USTRANSCOM and AMC in support of operational and strategic planning efforts.

Airlift Allocation Directorate (AAD). The AAD is responsible for allocating aircraft and aircrews to support tactical and strategic airlift and AE. The AAD manages the JA/ATT program and allocation of man-days for ARC aircrews and 618 AOC augmentation based on policy guidance provided by AMC/A3/10. It routinely engages with AMC, USTRANSCOM, and ARC directors, and AMC/ARC wing and operations group commanders.

Airlift Directorate (ALD). The ALD applies operational art to develop detailed execution plans for airlift. The ALD uses CCDR objectives and apportionment, AOD, and operational environment assessments to build airlift plans with support capabilities to accomplish air component commander tasks in fulfillment of supporting and supported CCDR requirements. Additionally, ALD is the single agency responsible for planning, monitoring, and evaluating worldwide strategic channel DTS common-user airlift of sustainment passenger and cargo traffic.

Air Refueling Directorate (ARD). The ARD plans, tasks, coordinates, and executes global AR requirements in accordance with the JCS priority system, as validated by USTRANSCOM. It directs and integrates execution of AMC and AMC-gained and, when required, theater-assigned AR forces, operating globally in support of SecDef requirements, including support to homeland defense, contingencies, exercises, global strike operations, coronet movements, support to ISR activities. It also supports distinguished visitor travel and business efforts.

GAMSS - Aeromedical Evacuation Directorate (GAD). GAD plans, tasks, coordinates, and executes global air mobility support for AFTRANS. The directorate is the C2 authority for AE, CR, aerial port coordination, and enroute maintenance support.

Intelligence, Surveillance, and Reconnaissance Directorate (IRD). The IRD provides full-spectrum, threat awareness to mobility aircrews by monitoring nation-state threats, non-state actors, and natural disasters. IRD personnel coordinate with national agencies, CCMDs, Service representatives, and intelligence community partners to provide tailored intelligence assessments in support of USTRANSCOM, AMC, and 618 AOC intelligence priorities.

Mobility Operations Directorate (MOD). The MOD executes C2 for the global employment of air mobility forces. The MOD's global operations division provides 24-hour-a-day support to air mobility missions. The MOD also provides responsive flight management, diplomatic clearances, flight planning, waiver facilitation, flight and air traffic management, tasked aircraft logistics support, aerial port services, and AE execution.

Global Weather Operations Directorate (WXD). The WXD ensures the fusion of weather impacts into mission planning and execution to maximize the safety, survivability, and use of AMC assets. It executes centralized mission weather services for AMC wings and ARC aligned organizations to provide tailored mission execution forecasts and graphical atmospheric depictions. It provides direct mission planning and execution products and services to USTRANSCOM, AMC, 618 AOC, and mobility crews operating worldwide.

618th Air Communications Squadron (ACOMS). The 618 ACOMS delivers operationally focused, state-of-the-art cyberspace capabilities to the 618 AOC.

The Air Reserve Component is an essential part of 618 AOC. Numerous individual mobilization augmentee (IMA) positions, ANG, and Air Force Reserve members are integrated throughout 618 AOC. IMAs and volunteer ARC personnel provide augmentation and surge capability.

APPENDIX C: SUPPORT, CONTINGENCY RESPONSE, AND AEROMEDICAL EVACUATION ELEMENTS

GLOBAL AIR MOBILITY SUPPORT SYSTEM ELEMENTS

The GAMSS is organized into air mobility operations wings (AMOWs), groups (AMOGs), and air mobility squadrons (AMSSs). All MAJCOMs have small numbers of air mobility support forces assigned to their wings that contribute to GAMSS.

Air Mobility Operations Wing or Group. AMC has two geographical AMOWs, each consisting of two AMOGs with several subordinate AMSSs, detachments, and operating locations that may include USAF- or Navy-operated contracted terminals. These units make up the en route system, which provides air mobility support for the DTS, and missions executed by USTRANSCOM, or other CCMD assigned and attached MAF.

Air Mobility Squadron. AMSSs are overseas en route squadrons that receive, service, and launch air mobility missions at each location. The exact structure and mission of each unit is tailored for mission requirements.

Air Mobility Teams are a standardized force package of personnel and equipment designed to execute a condensed enroute mission under proactive and reactive maneuver conditions to provide standalone air mobility support, or GAMSS force augmentation, to ensure joint logistics flexibility, survivability, and effectiveness. An Air Mobility Team is a small multi-capable team consisting of approximately 16 personnel.

CONTINGENCY RESPONSE FORCES

Contingency Response Element (CRE). A provisional, pared, and tailored rapidly deployable organization established at locations where air operational support is nonexistent or insufficient. A CRE provides initial airfield operations, C2, and air transportation support. A CRE provides airfield surveys and assessments, operational assessments, C2, limited FP, initial airfield operations, limited ATC and weather services, organic BOS, quick-turn maintenance, air mobility support, as well as other capabilities. The CRE may also be composed of contingency support elements from various units and deploys in support of special assignments. A CRE provides a level of aerial port and C2 services capable of supporting a working MOG of two aircraft at a time for 24-hour operations, with C2 coverage. This team may include an O-6 to provide senior airfield authority, work with host nations and joint partners, and liaison with senior leadership via C2 channels.

Contingency Response Team (CRT). Performs the same function as a CRE, but on a smaller scale. A CRT is a small multi-capable team consisting of approximately 25 personnel, normally led by a senior non-commissioned officer. A CRT provides a level of aerial port and C2 services capable of supporting a working MOG of one aircraft at a time for 12-hour-a-day operation, with 24-hour C2 coverage.

Airfield Assessment Team (AAT). An AAT is comprised of select members taken from a CRE. They are multi-skilled experts who verify airfield operations information, including obtaining and evaluating additional details pertinent to safe operations. They provide commanders and planners with valuable information on the suitability of airfield

operations. An AAT temporarily removes personnel from a CRE/CRT, reducing the CRE/CRT's capability until the team is reintegrated. If tasked and manned appropriately, the AAT can also conduct full surveys of an airfield for future planning. This process takes significantly longer than a mission-specific assessment.

Joint Inspector (JI) Team. The JI Team is manned with personnel taken from a CRE to accomplish GAMSS taskings that only require JIs or load planners, but not a whole CRE. They provide the air component to the joint inspection team for airland contingency support. Like an AAT, the JI Team temporarily removes personnel from a CRE/CRT, reducing the CRE/CRT's capability until the team is reintegrated.

Expeditionary Air-Ground Liaison Element (EAGLE). EAGLEs advise, assist, and accompany joint interagency, intergovernmental, and multinational users in the planning, preparation, employment, and inspection of joint cargo, passengers, and documentation for air movement. Additionally, EAGLEs assess, monitor, and evaluate the joint user's compliance for military and contracted airlift.

Joint Task Force-Port Opening (JTF-PO). Each contingency response group (CRG) may be trained to partner with an Army rapid port opening element to generate a JTF-PO. JTF-PO is a USTRANSCOM-owned entity designed to not only offload air cargo and passengers, but to onward move them up to 10 kilometers from the airfield, and then establish an interface with the theater distribution system. When a JTF-PO is activated, the CRG commander is normally designated as the senior airfield authority.³²

CONTINGENCY RESPONSE ORGANIZATIONS

Contingency Response Wing (CRW). The CRW is a fixed unit that coordinates the generation of resources for and deployment of subordinate units to provide mobile air mobility support capability.

Contingency Response Groups (CRG). CRGs are home station organizations that rapidly deploy tailorable, multi-role, multi-skilled, expeditionary CR teams, organized to quickly assess and open forward contingency airbases and conduct air support operations anywhere in the world. CRGs ensure mission-ready airfield assessment and survey teams, airfield operations, C2, aerial port, quick-turn aircraft maintenance, weather, intelligence, air traffic control, security forces, finance, fuels, supply, legal, and contracting personnel are available to project and sustain combat forces worldwide. AMC, PACAF, USAFE, and the ANG have assigned CRGs.

Air Mobility Advisory Group (AMAG). An AMAG organizes, trains, and equips air mobility liaison officers (AMLO), AMD augmentation, and air advisors. These units are critical enablers for MAF operations.

★ **Mobility Support Advisory Squadron (MSAS).** The MSAS organizes, trains, and equips force packages of air advisors to assess, advise, assist, train, and equip partner nation air forces and facilitate access and influence before crisis or conflict.

³² For additional information on JTF-PO, see JP 4-09, *Distribution Operations*.

- ★ **Air Mobility Operations Squadron (AMOS).** Although assigned to a CRW, the AMOS does not function as a GAMSS element. AN AMOS trains and equips personnel specifically to deploy and perform AMD augmentation duties in support of a theater AOC, either as a complete “plug-in” module or to fill individual requirements.
- ★ **Aeromedical Evacuation Liaison Officer (AELNO).** AELNOs are aeronautically qualified flight nurses specifically trained to provide casualty movement support and aeromedical expertise to forward ground forces during contingencies or exercises. They may be part of a larger aeromedical liaison team. AELNOs present the ground commanders’ casualty evacuation concerns to air mobility leadership for resolution. AELNOs are trained and tasked to represent their ground commander’s casualty evacuation needs and staff PECCs.
- ★ **Air Mobility Liaison Officer (AMLO).** AMLOs are rated officers specifically trained to provide air mobility expertise and close combat operations support to ground forces in garrison and during contingencies or exercises. AMLOs examine operations and voice concerns to air mobility leadership. AMLOs are organized and empowered to serve as the single authoritative voice representing and advising the ground commanders they support.
- ★ **Air Advisors.** The USAF organizes, trains, and equips air advisors as members of the professional Security Cooperation Workforce to support CCDR efforts to build partnerships, improve partner airpower capabilities, increase interoperability with US Forces, and integrate air operations. Air advisors embed with tactical echelons of ally and partner nation forces to assess, support, liaise, and advise during multinational responses ranging from human caused crises and natural disasters to large-scale conflict operations to ensure interoperability and sustain the integrity of foreign partnerships.

AMC Wings. All of AMC’s various wings have embedded air mobility support forces. These forces contribute to GAMSS through both their home station operations and as a source of expertise that can attach to other CCDRs’ theater organizations.

Other Air Force MAJCOMs. USAFE and PACAF have CRGs which are usually the first source of CR forces for contingencies within their theaters. Additionally, some MAJCOMs may create specialized ACE Contingency Support Teams (CSTs) and Combat Mobility Flights (CMFs) to augment CRG capabilities. These teams can operate with or without a CRG. When deployed in conjunction with CRG, ACE-CSTs personnel fall under the OPCON of that CRG regardless of MAJCOM affiliation.

- ★ **Air Traffic Control (ATC) and Special Tactics Teams (STT).** AFSOC provides ATC and STTs for communication at FOSs, to enable airlift operations. Additionally, STTs survey and assess LZs, HLZs, DZs, and FARPs which expand the availability of FOSs. STTs mark and establish assault zones and control until hand-off to conventional forces for extended operations. For operations within CONUS, control of these forces remains with AFSOC. Theater assigned SOF are under the OPCON of the theater special operations command or the joint force special operations component commander when established.

Air Reserve Components. ANG and AFRC have significant air mobility support forces. There are several AMOS within the ARC. They provide the same C2 capabilities as their Regular counterparts, supporting the AMD augmentation requirement.

★ **CRG.** ANG CRG units are gained by AMC upon mobilization.

★ **Contingency Response Flight (CRF).** CRFs are part of the GAMSS, and ANG units are gained by AMC upon mobilization. CRFs can provide a complete CRT.

THEATER AE SYSTEM ELEMENTS

The TAES provides command, control, communications, crew management, system support, and patient care. The following TAES elements may be scaled to meet specific theater requirements.

AE Command Squadron. The AE Command Squadron provides unit level command to assigned en route care forces. The AE Command Squadron provides no direct patient care capability, however, may be used as an advanced echelon to open and establish airbase operations. En route care forces that report to an AE Command Squadron include: AE Operations Teams, AE Crews, AELT, ERCC Teams, AE Communication Teams, Manpower Augmentation Teams, and some ERPSS.

Aeromedical Evacuation Operations Team (AEOT). AEOTs are the crew management, crew logistics support, and mission generation function of a TAES. The AEOT provides no direct patient care capability. The AEOT ensures mission readiness and supports the launch and recovery operations of assigned AE Crew and ERCC teams. The AEOT coordinates missions directly with an AOC for mission validation.

Aeromedical Evacuation Crew. AE Crew provides operational flight nurses and AE medical technicians for in-flight patient care. The AE crew composition and associated equipment can be scaled to meet patient acuity and mission demands.

En Route Critical Care (ERCC) Team. Standard AE Crews can be augmented with ERCC teams. ERCC consists of multiple medical teams that provide specialized patient care capabilities. These teams are limited and rapidly deployable resources to maintain or enhance the standard of care for patients who require continuous stabilization and highly advanced care during transport to the next level of medical treatment. ERCC capabilities include Critical Care Air Transport, Extracorporeal Membrane Oxygenation (ECMO), Neonatal Intensive Care Unit (NICU), Burn, and obstetric support.

AE Liaison Team (AELT). AELTs provide a direct interface for user service agencies with casualties to the TAES. The AELT provides no direct patient care capability. AELTs provide TAES coordination capability to forward joint and combined medical assets to expeditiously initiate patient movement requests. AELTs are designed to deploy down to the level where initial patient movement requests are generated.

AE Communications Team. AE communications teams can create and maintain a TAES communication network with or without BOS support. The communications teams have no independent role in the TAES and are adjuncts to facilitate communications between AE Command Squadrons, AEOTs, AELTs, and ERPSS.

En Route Patient Staging System. ERPSS is a modular holding facility that provides and maintains patient medical care during the transfer between medical facilities. ERPSS should be co-located near a medical treatment facility and adjacent to a MAF airfield. The ERPSS has no ancillary medical capability and is designed to maintain the care of stabilized patients awaiting evacuation for short durations. ERPSS is responsible for patient care during transport of the patients between medical facilities and aircraft.

REFERENCES

All websites accessed 5 June 2024.

Doctrine can be accessed through links provided at: <https://www.doctrine.af.mil/>

US AIR FORCE DOCTRINE: <https://www.doctrine.af.mil/>

- ★ AFDP 1, [The Air Force](#)
- ★ AFDP 1-1, [Mission Command](#)
- ★ AFDP 3-01, [Counterair Operations](#)
- ★ AFDP 3-10, [Force Protection](#)
- ★ AFDP 3-13, [Information in Air Force Operations](#)
- ★ AFDP 3-27, [Homeland Operations](#)
- ★ AFDP 3-40, [Counter-WMD Operations](#)
- ★ AFDP 3-52, [Airspace Control](#)
- ★ AFDP 3-59, [Weather Operations](#)
- ★ AFDP 3-72, [Nuclear Operations](#)
- ★ AFDP 4-0, [Combat Support](#)
- ★ AFDP 4-02, [Health Services](#)
- ★ AFDN 1-21, [Agile Combat Employment](#)

JOINT DOCTRINE

Joint Electronic Library (JEL): <https://www.jcs.mil/Doctrine/>

JEL+: <https://jdeis.js.mil/jdeis/index.jsp?pindex=2>

- ★ JP 1 Vol 2, [The Joint Force](#)
- ★ JP 2-0, [Joint Intelligence](#)
- ★ JP 3-0, [Joint Campaigns and Operations](#)
- ★ JP 3-11, [Operations in Chemical, Biological, Radiological, and Nuclear Environments](#)
- ★ JP 3-27, [Joint Homeland Defense](#)
- ★ JP 3-28, [Defense Support of Civil Authorities](#)
- ★ JP 3-29, [Foreign Humanitarian Assistance](#)
- ★ JP 3-30, [Joint Air Operations](#)
- ★ JP 3-36, [Joint Air Mobility and Sealift Operations](#)
- ★ JP 3-68, [Joint Noncombatant Evacuation Operations](#)
- ★ JP 4-01, [The Defense Transportation System](#)
- ★ JP 4-02, [Joint Health Services](#)
- ★ JP 4-09, [Distribution Operations](#)

TACTICAL DOCTRINE

Air Force Weapon System TTPs (AFTTPs):

<https://intelshare.intelink.gov/sites/561jts/SitePages/Home.aspx>

- ★ AFTTP 3-3.AOC, [Air Operations Center](#)
- ★ AFTTP 3-3.IPE, [Integrated Planning and Employment](#)

Medical Service TTPs:

https://kx.health.mil/kj/kx3/Doctrine/Pages/doctrine_hierarchy_chart.aspx

- ★ AFTTP 3-42.5, [*Aeromedical Evacuation*](#)
- ★ DAFTTP 3-42.8, [*Expeditionary Medical Logistics \(EML\) System*](#)

MISCELLANEOUS PUBLICATIONS

- ★ CJCSM 3122.01A, [*Joint Operations Planning and Execution System \(JOPES\) Volume 1, Planning and Policy Procedures*](#)
 - ★ DAFI 48-107V2, [*En Route Critical Care*](#)
 - ★ DoDD 5100.01, [*Functions of the Department of Defense and Its Major Components*](#)
 - ★ AFI 11-289, [*Phoenix Banner, Silver, and Copper Operations*](#)
 - ★ AMCI 10-202V7, [*Director of Mobility Forces \(DIRMOBFOR\) and Air Forces Transportation Liaison Officer \(AFTRANS LNO\) Policy and Procedures*](#)
 - ★ AMCI 10-402, [*Civil Reserve Air Fleet*](#)
 - ★ [*Mobility Air Forces Countering Weapons of Mass Destruction Concept of Operations \(MAF CWMD CONOPS, approved 5 Aug 19, AMC/A3/10\)*](#)
 - ★ [*"One year later, historic Afghan airlift inspires pride and reflection across the Air Force"*](#)
 - ★ [*Air Force Future Operating Concept Executive Summary, 6 March 2023*](#)
 - ★ [*DoD Foreign Clearance Guide*](#)
-