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VOLUME I

AIR TRANSPORT (AT) DOCTRINE

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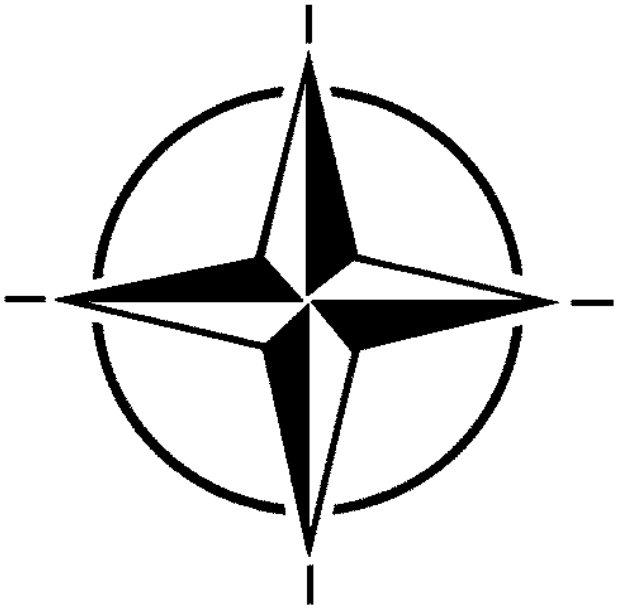

NORTH ATLANTIC TREATY ORGANIZATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

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NATO LETTER OF PROMULGATION

12 April 2018

1. The enclosed Allied Transport Publication ATP-3.3.4, Volume I, Edition A, Version 2, AIR TRANSPORT DOCTRINE, which has been approved by the nations in the Military Committee Air Standardization Boar (MCASB), is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 7207.

2. ATP-3.3.4, Volume I, Edition A, Version 2, is effective upon receipt and supersedes ATP-3.3.4, Volume I, Edition A, Version 1, which shall be destroyed in accordance with the local procedure for the destruction of documents.

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4. This publication shall be handled in accordance with C-M(2002)60.

Zoltán GULYÁS
Brigadier General, HUNAF
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATIONS BY NATIONS
Vol I	FRA, SVN, USA

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
FRA	The C2 structures do not take into account the specific French character of aviation combat; the French Army Light Aviation (Aviation légère de l'Armée de terre) will therefore not implement this STANAG.
SVN	SAF do not have air-to-air refuelling capabilities.
USA	1) ATP-3.3.4 Vol I: No entity may cite this agreement as justification to take control of USA aviation assets. 2) STANAG 7207, OTHER RELATED DOCUMENTS. USA will not recognize the documents listed as STUDY or FINAL DRAFT unless they are covered and promulgated.
Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.	

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PREFACE

AIR TRANSPORT (AT) DOCTRINE

References:

A. AJP-3.3 (STANAG 3700) - ALLIED JOINT DOCTRINE FOR AIR AND SPACE OPERATIONS
B. AAP-06 (STANAG 3680) - NATO GLOSSARY OF TERMS AND DEFINITIONS (ENGLISH AND FRENCH)
C. AAP-15 - NATO GLOSSARY OF ABBREVIATIONS USED IN NATO DOCUMENTS AND PUBLICATIONS

1. Air Transport[1] (AT) enables the global, regional and local movement of personnel and materiel, both military and civilian. With acknowledged limitations in payload compared with other modes of transport, it is a fast and versatile way to deploy, sustain and redeploy forces.

2. AT is a fundamental enabler of rapid movement of forces especially when ground threats or terrain features/conditions hamper freedom of movement. Due to its quick reaction, speed of execution and global range, AT also offers the most effective means to enable and sustain the rapid, even decisive, projection of air power to distant theatres and to remote locations.

3. AT operations range from the low key insertion of special forces to full spectrum airborne operations which enable concentration of combat power at high tempo. Moreover, a credible capability to conduct airborne operations will force an opponent to reserve and confine a number of forces in order to counter this potential threat to his vital assets. An airborne operation capability constitutes an important element of coercion, diversion and surprise.

4. AT is vital for aeromedical evacuation from austere locations. Where risks to life in combat are high, intra- and inter-theatre AT strongly underpin the moral component of fighting power; it is often the only way to get wounded soldiers to specialist medical support quickly enough.

[1] Also known as ‘airlift’.

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CHAPTER 1 INTRODUCTION

1.1. PURPOSE

The purpose of this publication is to provide policy and procedures for NATO-led operations and exercises. It aims to achieve effective AT operations for NATO commanders at all levels.

1.2. SCOPE

1. This publication provides details on the movement and sustainment, by air, of personnel and materiel.

2. This publication introduces the concepts and general principles of AT, addresses the utility of AT, and deals with Command and Control (C2).

1.3. APPLICABILITY

This publication is applicable to NATO commanders and nations participating in, or contributing to, the full spectrum of NATO activities. It comes from the operational doctrine AJP-3.3, Allied Joint Doctrine for Air and Space Operations. Furthermore, AT is an integral component of the overall operational and logistic design and therefore this document is also applicable to the operational and logistic community, military and civilian. It is supported by other detailed Tactics, Techniques and Procedures and Standard Operating Procedures where appropriate.

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CHAPTER 2 FUNDAMENTALS

2.1. GENERAL

AT, an integral element of air power, allows the Joint Force Commander (JFC) to move and sustain forces anywhere in the world and across the entire spectrum of operations. It provides rapid and flexible mobility options to military and civilian, national and international governmental and non-governmental organisations to quickly respond to various crisis situations worldwide.

2.2. SUBORDINATED AIR TRANSPORT PUBLICATIONS

These publications are as follows:

a. Air Movements. Tactics, techniques and procedures are contained in ATP 3.3.4.1.

b. Air Transport Operations. Tactics, techniques and procedures are contained in ATP 3.3.4.3.[2]

c. Airborne Operations. Tactics, techniques and procedures are contained in ATP 3.3.4.4.

2.3. TYPES OF AIR TRANSPORT OPERATIONS

1. AT can deliver forces and materiel with minimum delay and is often a crucial capability for operational and tactical commanders within a Joint Operations Area (JOA).

2. AT operations are classified into two main categories which are not mutually exclusive:

a. **Inter-theatre AT**. Inter-theatre AT provides the air bridge that links the theatre or JOA to bases outside the theatre or JOA and/or to other theatres or JOAs.

b. **Intra-theatre AT**. Intra-theatre AT provides AT within a specific theatre or JOA.

[2] ATP-3.3.4.2. is reserved for Air-to-Air refuelling

3. AT operations may utilize various aircraft-basing options to accomplish operational missions very rapidly, especially for deployed or expeditionary operations. The converse is also true, in other words most basing options are often if not always dependent on some level of AT support. The different types of bases include the following:

a. **Main Operating Base (MOB)**. A location at which a unit is assigned and from which military operations originate. A base can be considered a main operating base by one nation but deployed operating base/forward operating base by a unit that is deployed to that location. Main operating bases have command and control infrastructure, a robust supply network and strengthened force protection.

b. **Intermediate Staging Base (ISB)**. A temporary base having minimum essential operational and support facilities, normally located between a main base and a designated area of operations, which a unit or part of a unit will deploy to and operate from. Note that an ISB could be a commercial airport.

c. **Deployed Operating Base (DOB)**. A location to which a unit/units or part of a unit will deploy, from which to conduct military operations.

d. **Forward Operating Base (FOB)**. Any secured forward position that is used to support tactical operations. A forward operating base may or may not contain an airfield, hospital, or other facilities. The base may be used for an extended period of time. Forward operating bases are traditionally supported by main/deployed operating bases that are required to provide backup support to them. A forward operating base also reduces reaction time and increases time on task to forces operating from it. The forward operating base is normally associated with a JOA.

e. **Forward Operating Location (FOL)**. A designated airfield at which dedicated facilities are maintained to support periodic air operations.

f. **Airport of Embarkation (APOE)**. The airport at which troops and materiel are loaded for airlift to an operational theatre for a deployed operation.

g. **Airport of Debarkation (APOD)**. The airport at which troops and materiel are off-loaded in an operational theatre for a deployed operation.

4. When forces are deployed, either domestically or internationally, there are always instances where immediate lift is required either into, or out of the JOA (e.g. repatriation missions and critical replenishment). These immediate lift requirements are normally addressed using AT. Conversely, AT resources are often dependent on bases/locations for their own replenishment and sustainment, whether it is fuel, food, repair or accommodations.

5. The start and end points for the AT component of a deployment phase of an expeditionary operation are known as APOE and APOD respectively. For the redeployment phase, the APOE and APOD are normally the opposite of the same airports used for the deployment phase.

2.4. TYPES OF AIR TRANSPORT MISSIONS

1. **Routine Air Transport**. Routine AT operates either on a regular schedule or an ad hoc basis for routine military requirements other than operations. On routes where there is a recurring need to provide AT on an on-going basis, the support may be provided by a published, fixed flight schedule, with bookings made through a central agency. The frequency of these flights will be determined by the movement demands along that specific route.

2. **Air Logistic Support**. Air logistic support missions are planned in direct or continuous support of an operation and respond to the requirements of tactical-level commanders. They are normally authorized at the tactical level and are thus tactical in nature. Notwithstanding, the requirements to deploy, sustain, and redeploy forces may also necessitate air logistic support operations to be planned and conducted at the operational level. These operations may be inter-theatre or intra-theatre and can use the traditional 'hub and spoke' logistics delivery model, as well as provide direct delivery to austere airfields. Air logistic support missions are *demand driven*. The inherent capability to move personnel and materiel over long distances allows timely sustainment of deployed forces, without having to forward deploy immense quantities of equipment and supplies. These items can be held at main bases and brought forward as required.

3. **Airborne Operations.** Airborne operations provide air-delivered combat power to seize ground or installations through the airdrop or airland delivery of forces directly into an objective area. The effects of airborne operations may be strategic, operational or tactical within the joint campaign plan. They generally pose higher risks for the personnel and materiel involved; however, the potential gains make them a valuable element in the air power inventory.

4. **Aeromedical Evacuation (AE)**. AE is the movement of patients under medical supervision to and between Medical Treatment Facilities (MTFs) by air transportation. The reduced forward medical footprint of contemporary operations has made rapid and responsive AE operations more critical than in the past. The specialist personnel and equipment required to provide the medical support for AE must be given

access to the air assets to allow preparation of the airframe. When aircraft are used exclusively for dedicated AE missions they can be afforded additional protection by marking them in accordance with the Geneva Conventions. Planners and crew must be aware of the legal constraints and protections inherent with the use of these symbols. (STANAG 3204)

5. **Support to other Missions**. Support to other missions includes those tasks conducted by AT assets that are not included in the other AT categories. For example, AT used in a special air operation role provides commanders with the capability to reach specific objectives that may not be achievable through more conventional AT practices. Support to other missions may include both combat and non-combat tasks. Such operations may be conducted in conjunction with other joint operations or autonomously. Support to other air operators often require dedicated, specially-equipped aircraft and/or, specially-trained crews, and may use non-standard procedures.

2.5. METHODS OF AIR TRANSPORT DELIVERY

1. AT delivery can be carried out by the following methods:

   a. **Airland**. Airland delivery occurs when an aircraft lands[3] and unloads its payload. Airland delivery, as opposed to airdrop, is the preferred method when conditions permit. In a safe area it minimizes the risk of injury to personnel and damage to equipment, eliminates payload dispersal and offers an increased availability of resources. This delivery method can be conducted at a variety of landing destinations from well-established airbases to unimproved landing zones. Extended airland operations require secure, suitable, and conveniently located airfields with appropriate airlift support assets to facilitate offload. Several variations in the ground operations of airland operations exist. Proven operational procedures, well-planned airbase defence and rapid offloading and on-loading techniques associated with various AT aircraft can minimize risks against threats. Unless otherwise constrained, airland delivery is the preferred method for most air movements.

   b. **Airdrop**. Airdrop is the delivery of personnel and/or materiel from an aircraft in flight to a drop zone. This method is used when air landed is not possible, either because of a lack of appropriate terrain or because of the tactical situation. Airdrop allows commanders to project and sustain combat power where ground transportation network may not be available or when time is critical.

[3] This includes aircraft hovering.

2.6. TYPES OF ASSETS

1. There are three types of AT assets utilized by NATO nations:

   a. Fixed-Wing;

   b. Rotary-Wing;

   c. Tilt-Rotor.

2. **Fixed-Wing**. Fixed-wing AT aircraft are capable of either inter-theatre lift, or intra-theatre lift, or both. They may deploy from home base to areas of operation in days or even hours. They may also reach from their deployed operating base to typical areas of operation in hours and sometimes minutes.

3. **Rotary-Wing**. Rotary-wing AT aircraft are the linchpin of tactical mobility, enabling rapid tactical movement of personnel and materiel into areas where fixed-wing aircraft cannot land. They typically operate at low altitudes and low speed compared to fixed-wing aircraft. They are fundamental enablers of ground manoeuvre and surprise, allowing troops to circumvent difficult terrain and bypass ground threats to troop movement and re-supply. Rotary-wing aircraft allow ground forces to mass capability in time and space and to sustain high tempo operations.[4]

4. **Tilt-Rotor.** Tilt-rotor, employing both fixed- and rotary-wing capabilities, are a relatively new asset at the disposal of the Joint Force Commander to meet a variety of theatre, operational and tactical objectives. The combination of the fixed-wing attributes of speed and range with the rotary-wing attribute of precision landing offers the capability of delivering precision AT throughout the JOA.

[4] Rotary wing doctrine is contained in ATP-49(G)

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CHAPTER 3 COMMAND AND CONTROL

3.1. GENERAL

The generation of AT assets and co-ordination between NATO and participating nations occurs at the strategic command level. At the operational level, the Joint Force Commander (JFC) will exercise command and control (normally operational control), as delegated by SACEUR/Joint Force Command HQ, over all force components provided to him. The JFC will normally delegate operational control of air assets to the Joint Force Air Component Commander (JFACC). The JFACC plans, integrates, allocates, controls, and tasks, joint air operations based on the JFC's guidance and objectives, in accordance with the air apportionment decision and the authority, commander relationship and responsibilities laid down by the JFC.

3.2. SPECIFIC AT ROLES

1. **Inter-theatre C2.** The NATO Allied Movement Coordination Centre (AMCC) initiates, plans, prioritizes, coordinates and de-conflicts inter-theatre AT, including deployment, transportation for sustainment and re-deployment. It also advises and assists in the development of bilateral or multi-lateral agreements and arrangements for inter-theatre AT as required.

2. **Intra-theatre C2**. For intra-theatre AT, C2 occurs at the sub-regional / component command level, by the establishment of an Airlift Coordination Centre (ALCC) as part of the Air Operations Centre (AOC). The ALCC may exist as a stand-alone unit or as an entity embedded within other divisions of a CAOC. The ALCC coordinates, executes and controls intra-theatre AT operations. ALCC tasks and responsibilities include:

a. schedule and task AT operations for those AT assets that have undergone Transfer of Authority to NATO, based on JFC priorities for validated AT requirements;

b. allocate slot times for arrival/departure of AT aircraft at airfields in the JOA in response to requests from nations or the appropriate NATO Commander;

c. integrate AT activity with other organisations (International Organisations, Non-Government Organisations, civilian AT); and

d. publish the AT schedule as an integral portion of the Air Tasking Order under auspices of the AOC.

3. **Aeromedical Evacuation C2.** The overall coordination of tactical and strategic air movement is the responsibility of the relevant NATO theatre movement agencies and air commands, such as the AMCC, Joint Transportation Coordination Centre, National Movement Coordination Centre, or Regional Airlift Control Centre or Patient Evacuation Coordination Cell. Air commands will normally establish an Aeromedical Evacuation Control Cell within their staffs.[5]

4. **Special Air Operations C2.** Special air operations are normally conducted in support of the Joint Force Special Operations Component Commander. The Special Operations Liaison Element will coordinate special air operations in support of their core tasks.

3.3. AT INFORMATION FLOW

1. **Allied Movement Co-ordination Centre (AMCC)**. Co-ordinates and de-conflicts national movement plans, conducts movement planning conferences as required, establishes theatre movement priorities and publishes a Multinational Detailed Deployment Plan (MNDDP).

a. Co-ordinates the execution of the MNDDP from outside the JOA into the APODs based upon the reception capabilities, priorities and requirements of the JHQ (NRF/JTF/CJTF).

b. Co-ordinates inter-theatre airlift (also known as Strategic Airlift) missions with the Joint Logistics Support Group (JLSG), the Airlift Coordination Centre and other relevant agencies in order to de-conflict loading/off loading, ramp space requirements, refuelling needs and other logistics support.

c. Expedites, if deemed appropriate, the processing of diplomatic, technical, customs and movement clearances as required and publishes diplomatic clearance guidance for the Allied Joint Forces. This will be actioned through the Civil Emergency Planning Committee (CEPC).

d. Monitors the deployment of forces and assists the nations in expediting movements.

[5] Ref AJMedP-2, para 0403.3.

2. **Joint Logistics Support Group (JLSG).** The JLSG is part of a deployable logistics support infrastructure replaces the standing Multinational Joint Logistics Centre (MJLC) and assumes all logistics C2 functions under the Joint Force Commander (JFC). The JLSG controls all joint theatre logistics including comprehensive control (dependent upon Transfer of Authority (TOA)) of national assets deployed within a JOA under the purview of the JFC. In conjunction with the AMCC, the Movement and Transportation Coordination Cell (MTCC) of the JLSG:

a. Determines/validates theatre Air Movement requirements based on the requirements/requests received from the JHQ/components. Requests from outside agencies should be routed through the JHQ for component-equivalent validation.

b. Co-ordinates Air Movement requests / requirements which are beyond the CJTF's capability.

c. Co-ordinates arrival of AT with the Air Lift Coordination Centre to meet reception and onward movement requirements.

d. Acts as JFC's central executive authority for air movement requirements within the AOR.

e. Validates and prioritizes transportation requests.

f. Determines intra-theatre transportation method.

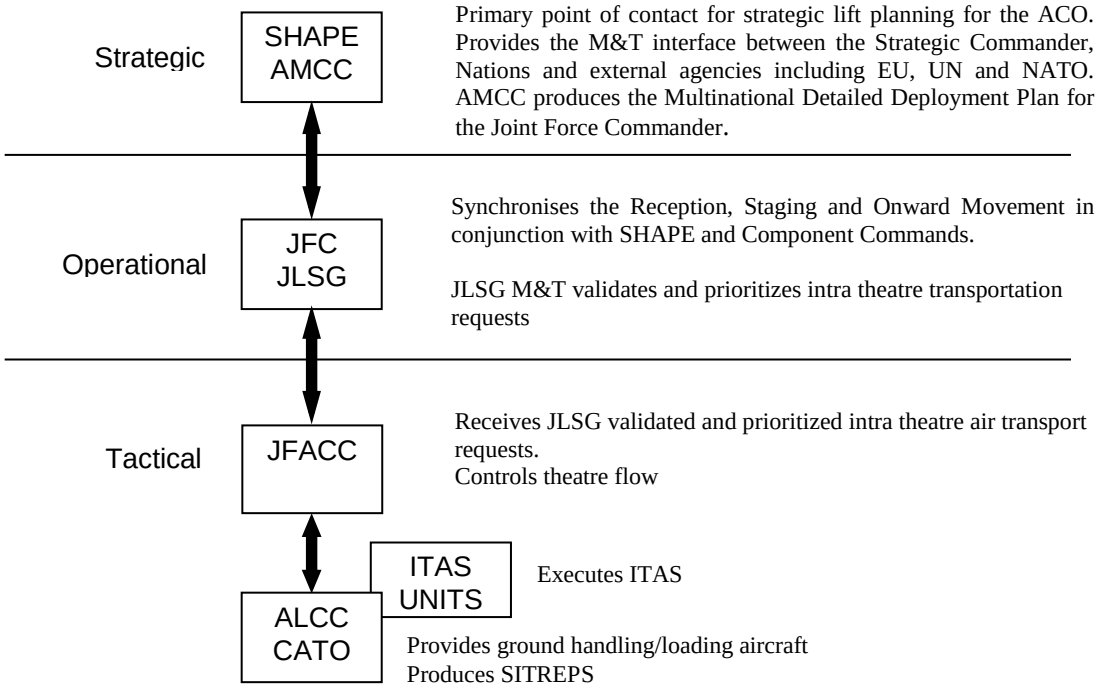
3. **Joint Theatre Movements Staff (JTMS).** When a JLSG is not established for an operation, a JTMS may be established in the JHQ and will assume the Movement and Transport (M&T) tasks/responsibilities.

4. **Joint Force Air Component Command (JFACC).**

Enables the AT mission via the Air Tasking Order (ATO) and Airspace Control Order (ACO). During the initial phases of an operation, or if operational requirements dictate reduced footprint, these missions may be tasked by a deployed element of the JFACC.

Information Flow Diagram

A generic diagram indicating the required flow of information between the involved elements in the execution of the AT mission is depicted below.



CHAPTER 4 PLANNING AND SUPPORT CONSIDERATIONS

4.1. GENERAL

To optimise the use of AT assets, several fundamental planning factors should be considered to enable efficient and effective operations. This chapter describes the establishment of a Combined Air Terminal Operation (CATO) and outlines key planning constraints for the commander.

4.2. ESTABLISHMENT OF CATO

1. Inter- and intra-theatre AT movements to and from a multinational deployed operating base require the establishment of an effective and substantial CATO organisation that is a decisive factor in ensuring the safe and efficient ground handling of such flights. CATO activities must be coordinated with planning and C2 entities at all levels of command.

2. The purpose of the CATO is to make optimum use of available and complementary assets to improve capabilities and interoperability for deployed air operations, whilst minimizing the logistic footprint.

3. The CATO will include some or all of the following functions, depending on the task:

a. Movements Plans;
b. Load Control;
c Passenger Control;
d. Cargo Control;
e. Aircraft Loading and Unloading Teams.

4. A combined joint statement of requirement is the basis for the activation of a CATO. The statement will detail which functions of the CATO are to be activated and with what strength.

4.3. GENERAL PLANNING CONSIDERATIONS

1. Airlift operations encompass a number of tactics, techniques and procedures to achieve the aim of transporting personnel and equipment by air in a variety of environments. National rules and regulations should complement internationally accepted regulations (e.g. IATA/ICAO). This chapter identifies common factors for all NATO nations to apply in support of NATO AT operations as well as exercises.

2. Early and continuous planning is vital. On receipt of a directive issued by the Theatre Commander, detailed planning will begin and be conducted on a joint basis. Liaison will be established with all naval, ground and air forces in support. Of orders issued, the following three are essential:

a. The Air Operation Directive (AOD) derived from JHQ guidance.

b. The orders for the AT Forces, including prioritised movement requirements.

c. The orders for the supported forces.

3. The planning sequences and considerations described should be commensurate to the scale of the operations. Plans for each stage of the operation are normally in the following sequence:

a. Mission objective(s);

b. Threat assessment;

c. Mission type;

d. Reception, Staging, Onward Movement and Integration (RSOM/I).

e. Operational risk management

4.4. AT PLANNING CONSIDERATIONS

1. As AT resources are scarce, timely, precise, so careful planning is required, therefore, planning staffs must have the following data available:

a. Number and type of aircraft and crews available;

b. Availability of charter aircraft;

c. Aircraft capabilities and limitations;

d. Characteristics of involved units, including specialist qualifications and interoperability procedures and/or assets;

e. Expected sortie rate;

f. Maintenance requirements;

g. Sustainment requirements (e.g. fuel).;

h. Availability of ground handling equipment;

i. Operational limitations (e.g. diplomatic clearances, customs rules and/or features).

j. Intelligence and threat assessment.

2. If information on a location selected for deployment is not available, an airfield site survey should be conducted by a team of subject matter experts to provide relevant information, limitations and requirements to an air-centric planning staff or working group. A sample at site survey checklist can be found in ALP-4.3. Supplement 1.

3. AT operations require flexibility in planning and execution. The supported forces' objectives combined with the meteorological and overall intelligence situation will dictate the planning and execution of the operation.

4. Airfield selection:

a. Planned flow rate of aircraft;

b. Airfield capacity (e.g. Maximum on Ground (MOG));

c. Airfield characteristics (Pavement Classification Number (PCN)/Aircraft Classification Number (ACN), runway dimensions, manoeuvring areas, infrastructure, firefighting cat., Aeromedical rescue and facilities, etc.);

d. For protection for Rest Of Night

e. Host Nation Support (HNS);

f. Proximity to and links with maintenance areas and movement agencies and the airhead for strategic lines of communications;

g. Ingress and egress routings for the area.

5. Close liaison between the AT units and the units to be transported is essential and may entail the exchange of liaison officers to as low a level as deemed necessary.

6. Characteristics and priority of payload.

7. AT aircraft capabilities are normally expressed in terms of payload and range depending on the configuration. Performance will vary and is dependent upon location and meteorological conditions; some of the factors to be considered are as follow:

a. The available payload capability should be used to the maximum extent possible for priority cargo and passengers;

b. If equipment has to be dismantled for loading, the components should be loaded in the same aircraft;

c. Drivers/crews travel in the same aircraft as their vehicle;

d. Equipment travels in the same aircraft and/or formation as its users;

e. When survivability or priority delivery of items is paramount, consideration should be given to duplicating the items for transport in separate aircraft.

8. However, it should be noted that mission objectives could dictate the acceptance of lower aircraft utilisation.

4.5. JOINT PLANNING

1. Upon completion of the initial studies, the components concerned will meet to discuss and finalise details of the following considerations and issue the related orders.

2. Considerations:

a. Appointment of liaison officers;

b. Number and type of aircraft and aircraft formations to be used in the operation;

c. Load capacity of each type of aircraft;

d. Priority of unit movements;

e. Composition of serials/chalks;

f. Sustainment flights;

g. CCT requirements;

h. Tactical air support;

i. Determination of LZs and/or DZs;

j. Airborne/ground unit desired landing pattern/sequence;

k. Selection of departure airfields and staging areas;

l. Determine lead time for force build up/preparation;

m. Deception and diversionary measures if required;

n. Force protection;

o. Sustainment;

p. Redeployment;

q. Use of spare aircraft/prioritisation of serial/chalks;

r. Fire control measures;

s. Public information policy;

t. RSOM/I.

3. Orders and instructions. After review of paragraph 2., the relevant commanders will issue the orders and instructions for the operation.

4.6. COMPONENT LEVEL PLANNING

1. Air transport resources will seldom be sufficient to satisfy all demands, particularly in large operations. Therefore, when planning for AT operations, it is necessary to employ the minimum number of aircraft capable of completing the task in the required time. The allocation of AT resources to supported services requires detailed staffing. JFACC or CAOC level considerations are:

a. Mission Objective;

b. C2 Structure;

c. Joint Planning. The co-ordination between supported and supporting components (e.g. Land, Maritime, Special Forces);

d. Threat Environment;

e. Meteorological Data;

f. Supporting/Available Assets (e.g. Ground forces, supporting Composite Air Operations (COMAO), Airborne Early Warning (AEW), Air-to-Air Refuelling (AAR), etc.) available to AT;

g. Joint Prioritised Target List (JPTL);

h. Air Operations Directive (AOD);

i. Airspace Control Order (ACO);

j. Special Instructions (SPINS);

k. Air Tasking Order (ATO);

l. Routes and Tactics;

m. Crew Considerations to include crew duty day, qualifications and composition;

n. Self-defence Capability;

o. Contingency/Deception Plans;

p. Interoperability. The limiting factors allowing different nations to operate together;

q. Target Area Data;

r. Aircraft Capabilities. The aircraft performance and loading capabilities;

s. Delivery Methods.

4.7. PLANNING CONSTRAINTS

1. The following planning constraints should be considered before deciding on the employment of AT:

a. **Basing**. The infrastructure and sustainment requirements for AT operations can be considerable and will include (but not be limited to) aircraft type and interoperability, runway dimensions and its status, navigation and approach aids, apron space, POL, technical support, spares, force protection and accommodation. Memoranda of Understanding, Status of Forces Agreements and Technical Arrangements may also be required;

b. **Threat**. Due to their operating characteristics, transport aircraft are particularly vulnerable to enemy air defence systems while in transit, and in critical phases of flight (take-off and landing). Aircraft defensive systems, effective training, force protection measures, intelligence support, and standardised tactics, techniques and procedures are required for AT operations into threat areas;

c. **Load.** Among numerous mission constraints for AT aircraft, capacity (volume and weight), human remains, and dangerous goods, must be taken into account in determining the feasibility of AT operations. Operational priorities will determine the most effective mode of transport;

d. **Fuel Availability.** The availability of fuel may impact the operational mission in different ways: on-board fuel which adds weight at the expense of more freight, airfield fuel supplies which determine mission parameters, and potentially air-to-air refuelling (if applicable) if fuel stops are impossible or impractical. The net effect of all three may have a direct impact on aircraft payload;

e. **Clearances**. Flight-specific clearances are always required, especially when entering an area of operations. Over-flight and Diplomatic Clearances may be required. These clearances can take considerable time to be obtained and must be requested well in advance. Furthermore, aircraft, aircrew, passenger and cargo clearances could be required depending on the mission;

f. **Environmental**. Theatre climatic conditions, atmospheric conditions, and airfield topography and obstacles can constrain AT operations. In particular, high temperature and high field elevation may restrain aircraft maximum take-off weight. Moreover, bad weather conditions can hamper or lead to cancellation of airdrops or landings;

g. **Resources**. Whereas the decisions to allocate AT assets and prioritize missions should be made at higher command levels, because AT assets can be in high demand, the decisions to execute and manage operational movements should be made at lower command levels;

h. **Landing/Drop/Extraction Zones**. When selecting the area to be used as a landing/drop/extraction zone, consideration must be given to the type of operation, urgency of the mission, safe delivery of personnel and cargo, natural and man-made hazards and obstructions, flight safety, and aircraft operational limitations;

i. **National Caveats**. If a country has unique requirements in the form of caveats that may potentially constrain the operational mission, these are essential to the planning process for joint operations.

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GLOSSARY

Terms and Definitions from AAP-6 are in italics

A

Airport of Debarkation (APOD). The airport at which troops and materiel are off-loaded in an operational theatre for a deployed operation.

Airport of Embarkation (APOE). The airport at which troops and materiel are loaded for airlift to an operational theatre for a deployed operation.

Aeromedical Evacuation (AE). *The movement of patients under medical supervision to and between medical treatment facilities (MTF) by AT.*

Air Assault. An operation in which combat forces and their equipment manoeuvre about the battlefield by aircraft to engage in ground combat.

Airborne Operation. *An operation involving the movement of combat forces and their logistic support into an objective area by air.*

Airdrop. *Delivery of personnel or cargo from aircraft in flight.*

Airland[6]. *Moved by air and disembarked, or unloaded, after the aircraft has landed or while a helicopter is hovering.*

Air Transport (AT). The rapid movement of personnel and materiel to and from a theatre of operations and within that theatre by air across the full spectrum of operations. The specific AT role to be applied in any of these operations and the associated requirements for specific training, equipment, force protection and other support is situation-dependent.

C

Combined Air Terminal Operation (CATO). The operation of an installation on an airfield with facilities for loading and unloading aircraft and processing traffic (personnel with their baggage, equipment, cargo and mail), and which is shared and/or operated by the forces of two or more allies.

[6] Airlanded is the NATO AAP-6 term.

D

Deployed Operating Base (DOB). A location to which a unit/units or part of a unit will deploy, from which to conduct military operations.

F

Forward Operating Base (FOB). Any secured forward position that is used to support tactical operations.

Forward Operating Location (FOL). A designated airfield at which dedicated facilities are maintained to support periodic air operations.

I

Intermediate Staging Base (ISB). A temporary base having minimum essential operational and support facilities, normally located between a main base and a designated area of operations, which a unit or part of a unit will deploy to and operate from. Note that an ISB could be a commercial airport.

M

Main Operating Base (MOB). A location at which a unit is assigned and from which military operations originate.

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