

ENR 1.9 Air Traffic Flow Management (ATFM)/Airspace Management (ASM)

1. General

1.1 Air Traffic Flow Management (ATFM) is a service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring ATC capacity is utilised to the maximum extent possible and the traffic volume is compatible with the capacities declared by the appropriate ATC authority.

1.2 In July 2011, the European Commission nominated EUROCONTROL as Network Manager with the task to provide a centralised ATFM service within part of the ICAO (EUR) Region (defined as the ATFCM Area) to optimise the use of air traffic system capacity. Brussels provides this service in conjunction with Flow Management The EUROCONTROL Directorate Network Management (DNM) in Positions (FMPs) established at each ACC.

1.3 The DNM is responsible for the planning co-ordination and implementation of ATFM measures within the ATFCM area and for collecting, maintaining and providing data on all flight operations and the air navigation infrastructure. The DNM operates the Network Manager Operations Centre (NMOC), which includes the Enhanced Tactical Flow Management System (ETFMS), the Integrated Initial Flight Plan Processing System (IFPS), and the Central Airspace and Capacity Database (CACD). A description of the ATFCM area and information on the Network Operations Systems can be found in the Network Operations Handbook.

2. ATFM Documentation

2.1 ICAO European Region ATFM Procedures

The general ATFM procedures which apply throughout the ICAO European Region are published in the ICAO Doc 7030, Regional Supplementary Procedures (Europe).

2.2 Network Operations Technical Procedures and Information Specific Network Operations Technical procedures and information can be found in the Network Operations Handbook published by the DNM and available from:

Post: Eurocontrol Library, Rue de la Fusée, 96, B-1130 Brussels, Belgium.

Phone: 00-32-2-729-3639/3023

Fax: 00-32-2-729-9109

or from the DNM website at: <https://www.eurocontrol.int/network-operations>

2.3 Network Operations Handbook sections include but are not limited to:

- a. The ATCFM Users Manual: this is a self-contained users manual for Aircraft Operators (AO), FMPs, Air Traffic Services Reporting Offices (AROs) and ATC units providing in one document an operational description of the ATFM procedures and of the related actions, information and message exchange.
- b. IFPS Users Manual: this is a self-contained users manual containing all the necessary procedures and information in order for users to be able to construct, transmit or when necessary to correct flight plans and associated update messages. Procedures for the distribution of such messages after processing by the IFPS are also described.

2.4 Only a limited selection of Network Operations Technical procedures are reproduced here in the AIP Denmark. Reference should be made to the Network Operations Handbook for comprehensive information and procedures.

2.5 Specific ATFM measures are published by the NMOC through the following means:

- the Route Availability Document (RAD) (see 3.2);
- the ATFM Notification Message (ANM)

- the ATFM Information Message (AIM);
- the European Airspace Use Plan (EAUP)

The ANM, AIM and EAUP are distributed via EUROCONTROLs public Network Operations Portal (NOP-portal): <https://www.public.nm.eurocontrol.int/PUBPORTAL/>.

The information is also distributed via B2B* services or can be accessed via CHMI*.

Request for reception of ANM and/or AIM via AFTN can be directed to COM-centre, København. ANM/AIM is also available at some Danish ARO. At the day of operation AO can obtain information about ATFM affected routes, restricted airspace and airports at the Central ATS Briefing Office - <http://www.briefing.naviair.dk>

Additionally, direct information and advice about the implemented ATFM measures, including last minute changes may be obtained and conferred with FMP Copenhagen Tel: 0045 3248 1934.

**B2B - Business to Business is a service offered by Eurocontrol which requires a subscription agreement.*

**CHMI - Collaborative Human Machine Interface is a tool offered by Eurocontrol to FMPs to access their systems.*

3. ATFM Processes

3.1 The emphasis for ATFM measures is changing from regulation (delaying aircraft on the ground) towards capacity management. Only when no other option is available will a regulation be applied and delays issued (Slot Allocation).

3.2 Alternative ATFM measures include the re-routing of aircraft both strategically and tactically. Permanent strategic routing requirements are published in the RAD. The RAD enables ATC to maximise capacity by defining restrictions that prevent disruption to the organised system of major traffic flows through congested areas.

3.3 In addition, routing 'scenarios' may be applied by the NMOC to help resolve particular problems on particular days. These involve recommended or mandatory routes for particular groups of flights or selected individual flights. Re-routes for groups of flights will be published by the NMOC in an AIM or ANM.

3.4 Re-routing may include restricting the level of an aircraft to keep it out of a particular ATC sector. This is known as level capping. Level capping scenarios are published for groups of aircraft.

3.5 A list of available re-routing and level capping scenarios is promulgated on the DNM website: <https://www.nm.eurocontrol.int/RAD/>

3.6 AOs complying with a re-route or level capping requirement shall cancel any existing flight plan and re-file on the new route in accordance with the Replacement Flight Plan procedure published in the IFPS Users Manual section of the Network Operations Handbook.

4. Slot Allocation Process

4.1 When no other option is available, a regulation will be applied by NMOC and departure times will be issued in the form of a Calculated Take Off Time (CTOT). This is facilitated by Computer Assisted Slot Allocation (CASA) algorithm within the ETFMS.

4.2 The ETFMS is largely automated and functions from an Aircraft Operators point of view in a passive mode. There is, therefore, no requirement to request a slot as the act of filing a flight plan effectively constitutes a request.

4.3 Pre-planned or strategic ATFM regulations are promulgated by the NMOC one day in advance by ANM. All changes and tactical additions are promulgated by ANM revision messages.

4.4 For flights subject to a regulation, ETFMS will send a Slot Allocation Message (SAM) containing a CTOT at Estimated Off-Block Time (EOBT) -2 hours. This will be sent to the aerodrome of departure as well as the AO via AFTN or SITA.

4.5 Revisions to, or cancellations of, the last issued CTOT may be initiated by NMOC, the Aircraft Operator, or the FMP/ATC unit on behalf of the AO. AOs requiring assistance should contact either the NMOC Central Flow HELPDESK (Tel: 00-32-2-745-1901) or FMP Copenhagen (Tel: 00 45 3248 1934).

4.6 All CTOT revisions or cancellations are to be made using the ATFM message exchange procedures described in the Network Operations Handbook.

4.7 Full details of the Slot Allocation Process are published in the ATFM Users Manual section of the Network Operations Handbook.

5. Flight Planning in the context of ATFM

5.1 As defined in ICAO Doc 7030 EUR, AO should be aware of that:

- a. Flight plans for flights which may be subject to ATFM shall be submitted at least 3 hours before the EOBT.
- b. Late filing of a flight plan may lead to a disproportionate delay;
- c. Any changes to the EOBT of more than 15 minutes for any IFR flight within the IFPS Zone shall be communicated to the IFPS;
- d. Full details of flight planning requirements within the ATFM area are included in the ATFM Users Manual section of the Network Operations Handbook.;

6. Responsibilities of Network Manager Operations Centre

6.1 The NMOC is responsible for:

- a. optimization of the overall performance effects on the European Air Traffic Management Network (EATMN) through planning, coordination and implementation of ATFM measures;
- b. consultation with operators on the definition of ATFM measures;
- c. ensuring the effective implementation of ATFM measures, together with local ATFM units;
- d. in coordination with local ATFM units identification of alternative routings to avoid or alleviate congested areas, taking into account the overall performance effects on the EATMN;
- e. offering a re-routing to those flights that would optimise the effect of point (d);
- f. providing information on ATFM in a timely manner to operators and ATS units, including: planned ATFM measures; impact of ATFM measures on take-off time and flight profile of individual flights
- g. monitoring of the occurrences of missing flight plans and multiple flight plans that are filed;
- h. suspending a flight plan when, considering the time tolerance, the ATFM departure slot cannot be met and a new estimated off-block time is not known;
- i. monitoring the number of exemptions granted.

6.2 The NMOC shall ensure that procedures and systems are established and maintained, (including relevant addresses and acceptable communication medium), to facilitate the timely provision, upon request, of an accepted flight plan to the airport slot coordinator or airport managing body of the departure and/or arrival airport.

7. Responsibilities of the Air Traffic Services

7.1 A FMP has been established in København ACC (Copenhagen Control) with the objectives:

- To act as the interface between NMOC and ATC by providing the NMOC with all information on the effectiveness of ATFM measures as experienced, to make maximum use of the available ATC capacity in København FIR;
- To coordinate action with the NMOC to provide the most effective ATFM service to ATC and aircraft operators.

7.2 ATC at departure aerodromes have the following responsibilities:

- a. ATC is responsible for departure slot monitoring. The exact procedures to be followed will depend on the way that ATS is organised at each aerodrome. A slot window of -5 to +10 minutes is available to ATC to optimise the departure sequence;
- b. ATC units responsible for departure slot monitoring shall be provided with the necessary information concerning the restrictions in force and slots allocated;
- c. ATC shall ensure that an ATFM slot, if applicable, is included as part of the ATC clearance;
- d. ATC shall take account of an applicable slot or flight suspension when a clearance is issued;
- e. ATC shall provide all possible assistance to Aircraft Operators to meet a CTOT or to co-ordinate a revised CTOT;
- f. ATC may deny start up clearance to flights unable to meet their slots until co-ordination with the FMP/NMOC has been effected and a revised CTOT issued.
- g. Unless special circumstances dictates, ATC shall not give take-off clearance to flights whose flight plan has been rejected or suspended.

7.3 With the introduction Flight Activation Monitoring (FAM), flights that are not notified as being airborne within 15 minutes of the Estimated Take-Off Time (ETOT) (ETOT = EOBT + taxitime) or CTOT will receive a Flight Suspension (FLS) message. To respond to a flight suspension, AO shall either update their EOBT or cancel the flight plan. If a flight is suspended during the taxiing phase, ATC is responsible for sending a DLA message.

7.4 ATS at aerodromes will assist in coordinating last minute changes to the applied ATFM measures with FMP Copenhagen, if requested by the pilot.

8. Responsibilities of Aircraft Operators

8.1 Aircraft Operators (AO) shall inform themselves of and adhere to:

- General ATFM procedures including flight plan filing and message exchange requirements;
- Strategic AFTM measures - e.g RAD;
- Current ATFM measures - e.g. specific measures applied on the day in question notified by ANM or FLS messages.
- Departure slots (CTOTs) issued by the NMOC and procedures related to changes to CTOTs.

8.2 For coordinated airports, AOs shall provide the necessary information allowing the establishment of the correlation between the flight designator contained in the flight plan and that notified for the corresponding airport slot.

9. Responsibilities of Airport Managing Bodies

9.1 Airport Managing Bodies wishing to receive accepted flight plans shall provide the NMOC with correct addresses as well as any other necessary information.

9.2 Airport Managing Bodies shall notify to the NMOC, directly or through FMP Copenhagen or local ATS units or both, all events that may impact air traffic control capacity or air traffic demand. They shall inform FMP Copenhagen and local ATS units where the notification is done directly.

10. Use of STS/Indicators in FPLs for ATFM Purposes

10.1 The following principles will apply:

- The insertion of an STS/... indicator in field 18 of a Flight Plan indicates that a flight requires special handling. This indicator is for use by all parties which may have to handle the flight;
- The following flights are exempted from ATFCM slot allocation:
 - a. flights carrying Head of State or equivalent status ['STS/HEAD'].
 - b. flights conducting search and rescue operations ['STS/SAR'].
 - c. flights carrying a life-critical emergency evacuation [STS/MEDEVAC].
 - d. flights engaged in fire-fighting [STS/FFR].

- The following flights are exempted from ATFCM slot allocation subject to approval by the relevant States Authorities, cf. 10.3, 10.4 and 10.5:
 - a. flights authorised by the relevant States Authorities to include in the flight plan [STS/ATFMX].

It should be noted that flights using only STS/STATE; STS/HUM or STS/HOSP will no longer automatically qualify the flight for exemption from ATFM measures.

Further information on the use of STS/ indicators for ATFM purposes may be found in the Network Operations Handbook, ATFCM Users Manual, published by the Eurocontrol Network Operations: <https://www.eurocontrol.int/network-operations>

10.2 Rule of Application for the Use of STS/ATFMX.

The following rule shall be applicable to all flights seeking to gain exemption from ATFM measures within the area of responsibility of the Eurocontrol Network Operations. It is intended to ensure that flights, which by the nature of their mission, cannot under any circumstances, be delayed due to ATFM. It is based on existing material in the Network Operations Handbook. It should be noted by all users that any flight which obtains exemption and which may have otherwise been delayed, will have that delay passed on to other flights. It is essential, therefore, that use of the exemption facility shall be properly controlled and policed so that genuine priorities may continue to operate without ATFM delay. To this end, this Rule of Application is implemented and applies to all flights operating within the Eurocontrol Network Operations area of responsibility.

10.3 Approval to Use STS/ATFMX.

Any flight meeting the criteria established to warrant exemption status may, provided the necessary approval procedure has been followed and the flight duly authorised by the Office established by the State for processing such requests, use STS/ATFMX for that flight and that flight only. Each flight shall require specific approval to use STS/ATFMX.

10.4 Guidelines for Determining the Need for the Use of STS/ATFMX for an Individual Flight:

- Is the safety of human life involved? This means that if the flight does not operate without delay a human life or lives may be lost. Such flights shall require specific medical/UNHCR authorization in support of their request;
- Is the person or are the persons on board a flight on State business of such importance that the flight cannot accept any delay?
- Is the mission of the flight being carried out by, or on behalf of, the State and is of such importance that any delay will jeopardise the success of the mission?
- Will a delay of a transport of Covid-19 vaccines put the vaccines at risk? If this is the case, and subject to approval to use STS/ATFMX, the flight is deemed a critical Covid-19 transport and the status indicator [STS/ATFMX] shall be supplemented by the remark [RMK/VACCINE] in field 18 of the Flight Plan.

If the answers to any of the above questions is yes, then the flight may apply for approval to use STS/ATFMX.

10.5 Procedure for Requesting Approval for the Use of STS/ATFMX

The operator of a flight seeking approval to insert the indicator STS/ATFMX in Field 18 of a flight plan for a flight departing from an aerodrome within København FIR and Bornholm TMA (Sweden FIR) shall obtain prior permission from Supervisor EKDK ACC a minimum of 2 hours in advance of the flight.

Supervisor EKDK ACC may be contacted (H24) as follows:

Phone: +45 32 48 19 33

Fax: N/A

e-mail: supa@naviair.dk

SITA: N/A

11. Non-adherence to Airport Slots

AOs, airport managing bodies and airport slot coordinators shall ensure that appropriate procedures are in place to facilitate the reporting of incidents of repeated operation of air services at times that are significantly different from the allocated airport slots or with the use of slots in a significantly different way from that indicated at the time of allocation, where this causes prejudice to airport, air traffic operations or the airport slot coordinator.

12. Non-adherence to ATFM measures

In accordance with EU regulation, 255/2010 laying down common rules on air traffic flow management, a Member State can lay down rules on penalties applicable to infringements on ATFM rules and procedures.

13. Airspace Management (ASM)

The overall responsibility for Airspace Management (ASM) within København FIR rests with the Danish CAA in consultation with Danish Military.

Airspace Management Cell (AMC)

- a) A joint civil/military airspace management cell is established to conduct the day-to-day management and allocation of national airspace structures in accordance with user requirements.
- b) Approved agencies responsible for airspace activities will submit requests for allocation of airspace structures to the AMC by (14:00 UTC Summer or 15:00 UTC Winter at the latest) on the working day before operations or as agreed with AMC.
- c) Airspace structure allocations are sent before 15:00 (14:00) UTC to the Network Manager Operations Centre (NMOC) in a daily Airspace Use Plan (AUP). The national AUP will be published to cover the period of 24 hours between 06:00 (05:00) UTC the next working day to 06:00 (05:00) UTC the day after.
- d) AMC will submit the AUP to NMOC and to approved agencies.

Airspace Management Cell (AMC):

TEL: +45 32 47 82 02

E-mail: amcek@naviair.dk

Conditional Routes (CDR1) are designed to supplement the permanent ATS-route network and to allow flights to be planned on ATS-routes, or portions thereof, that are not always available. CDR1's are generally established through areas of potential temporary allocation for other purpose identified under the generic term "AMC-Manageable Areas" (TSA, TRA and Manageable Restricted/Danger Areas).

CDR1s are in general available for flight planning during times published in MIL AIP section ENR 3.2 Updated information on the availability in accordance with conditions will be published daily in EAUP/EUUPS.

14. Addresses

FMP København:

Postal address:

Flyvesikringstjenesten/NAVIAIR

Naviair Alle 1

DK-2770, Kastrup, Denmark

TEL: +45 32 48 19 34

FAX: N/A

COM-centre København:

TEL: +45 32 47 82 23

Central ATS Briefing Office Denmark:

TEL: +45 32 47 82 72

FAX: N/A

Eurocontrol Library:

Postal address: The Eurocontrol Library

96, Rue de la Fusée

BE-1130 Bruxelles

TEL: +32 27 29 36 39

FAX: +32 27 29 91 09

NMOC:

Postal address: Eurocontrol Network

Operations (General)

96, Rue de la Fusée

BE-1130 Bruxelles

ATFM: AFS-FMD: EUCHCEUW

Help Desk: SITA-FMD: BRUEC7X

TEL: +32 27 45 19 01

FAX: +32 27 29 90 27

ATFM: AFS: EUCHZMTA

Messages: SITA: BRUEA7X