

# **NETWORK MANAGER RELEASE NOTES**

**PLANNED FOR IMPLEMENTATION IN  
2013-2014**



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## Document Changes Record

| Ed.   | Status  | Date       | Reason for change   |
|-------|---------|------------|---|
| 1.0   | Release | 03/08/2012 | -   |
| 2.0   | Release | 25/01/2013 | Deployment information added, Release notes information updated, detailed migration plan added. |
| 2.1   | Release | 04/02/2013 | Additional information on OPT, precision on B2B deployment.                                     |
| 2.1.1 | Release | 05/02/2013 | Typo in the year §4.2.2   |
| 2.2   | Release | 26/02/2013 | Migration dates updated (§4.1).   |
| 2.3   | Release | 11/03/2013 | CSST migration date updated (§4.1).<br>B2B migration dates clarified.                           |
| 2.3.1 | Release | 12/03/2013 | Adaptations in the Release Migration dates (§4.1)   |
| 2.3.2 | Release | 15/03/2013 | Adaptations in the Release Migration dates (§4.1)   |

## 1. INTRODUCTION

This document describes the **new** or **modified** functions that are delivered by the Network Manager as part of the Network Manager software Releases.

The objective of this document is to provide customers of the Network Manager Services with advance notice of modifications in order to anticipate any **impact** upon their operational procedures and/or systems.

The Network Manager Releases include many changes arising from different sources and coordinated through the Operations Coordination Group and its sub-groups. It allows the implementation of new functionalities to cope with Network Manager Directorate Business plans and in particular with DMEAN objectives.

The Network Manager Release Notes document is organized as a rolling document describing the functions currently under development for future releases. Other functions considered for possible development but without reaching yet a maturity status allowing their presentation are not included in this paper.

The Release Notes document contains 3 main parts:

- The “*Evolution Programmes*” part summarizing the main development Programmes.
- The “*Deployment*” part providing precise information on the Release deployment schedule.
- The “*Network Manager Evolutions*” part listing the delivered evolutions per Release and Functional Block. It contains also information on the deployment of the Functional Blocks that was previously stored in the Deployment Plan document.

**Important:** The *Release Deployment Plan* document has been integrated into the current *Release Notes* document in order to centralize in a single document all information related to the Release content. The *Release Deployment Plan* will thus no more be edited.

The current document is available at:

<http://www.eurocontrol.int/lists/publications/network-operations-library?type=3317&keyword=>

## 2. RELEASES CONTENT

| Programme  | Functional Block   |        | Release 17.0 | Release 17.5 |
|--|--|--------|--------------|--------------|
| <b>NOS-01 - Coordinated Process for ASM/ATFCM</b>  |  | §3.1.1 |              |              |
|  | FB283 Network Impact Assessment  |        | §5.2.1       |              |
| <b>NOS-03 - Airspace Data Repository - Phase 1</b> |  | §3.3.1 |              |              |
|  | FB556 eRestrictions (including FPR)                                    |        | §5.2.2       |              |
|  | FB569 SDO Download - EAD / CACD Comparison                             |        | §5.2.2       |              |
|  | FB572 Prepare Ops Validation with ASM Tools                            |        | §5.2.2       |              |
| <b>NOS-12 - Call-Sign Similarity (CSST)</b>        |  | §3.4.1 |              |              |
|  | FB568 CSST C&T   |        | §5.2.3       |              |
| <b>NOS-14 - AirCRAFT IDentification</b>            |  | §3.4.2 |              |              |
|  | FB537 Post-Deployment CCAMS C&T - 2                                    |        | §5.2.4       |              |
| <b>NOS-21 - Free Route Airspace Network-wide</b>   |  | §3.2.2 |              |              |
|  | FB526 FRA Improvements   |        | §5.2.5       |              |
| <b>NOS-41 - Network Operations Plan</b>            |  | §3.3.3 |              |              |
|  | FB557 NM customisable platform for all users                           |        | §5.2.6       |              |
|  | FB584 Updating the NOP, CHMI and Login page banners                    |        | §5.2.6       |              |
| <b>NOS-42 - Alignment to Performance framework</b> |  | §3.4.3 |              |              |
|  | FB456 Alignment to Performance framework                               |        | §5.2.7       |              |
| <b>NOS-43 - ATFCM Planning</b>                     |  | §3.1.3 |              |              |
|  | FB360 Scenario Data management   |        | §5.2.8       |              |
| <b>NOS-44 - Flight Plan interoperability</b>       |  | §3.2.3 |              |              |
|  | FB460 Increase planned flight trajectory consistency between AO and NM |        | §5.2.9       |              |
|  | FB499 Use of AO 4D profile - Prototype                                 |        | §5.2.9       |              |
|  | FB554 FIXM Strategy in SESAR   |        | §5.2.9       |              |
| <b>NOS-45 - Dynamic ATFCM</b>                      |  | §3.1.4 |              |              |
|  | FB533 Support TTA Trial (May 2013)                                     |        | §5.2.10      |              |
| <b>NOS-48 - NM-FOS Prototype validation</b>        |  | §3.3.4 |              |              |
|  | FB544 Initial Flight Object Prototype - 1                              |        | §5.2.11      |              |
| <b>ATFCM Domain</b>                                |  |        |              |              |
|  | FB524 ATFCM Domain improvements  |        | §5.2.12      |              |
| <b>Flight Planning Domain</b>                      |  |        |              |              |
|  | FB550 Reduce manual flight plan processing in IFPS                     |        | §5.2.13      |              |
| <b>Airspace Data Domain</b>                        |  |        |              |              |
|  | FB527 CIAM Improvements  |        | 5.2.14       |              |
|  | FB528 Airspace Data Domain improvements                                |        | 5.2.14       |              |
| <b>Correction and Tuning</b>                       |  |        |              |              |
|  | FB154 Reporting C&T for Release 17                                     |        | §5.2.15      |              |

**[Update v2.0]:**

FB560 (Real time network situation displays) was removed from Release 17.0; its features have been included in the Technical Block TB100 (Map display for the NOP) planned for Release 17.5.

### **3. EVOLUTION PROGRAMMES**

You will find below a summarized description of each Programme that the Network Manager developments are serving. They are grouped in 4 main Evolution Areas.

#### **3.1. NETWORK OPERATIONS MANAGEMENT AND MONITORING**

##### **3.1.1. Programme NOS-01: Coordinated process ASM-ATFCM**

The “Coordinated process ASM-ATFCM” Programme provides the frame for the further evolutions of the deliverables provided by the ASM Improvements Initiative that has introduced more dynamicity of the ASM/ATFCM processes during the last four years.

The Programme will aim at:

- Introducing performance driven operations based on the management of Airspace Configurations.
- Providing processes that support the use of more dynamic and flexible elements.
- Describing a seamless, CDM based process with an advanced real time management of Airspace Configurations as well as a continuous sharing of information among all ATM partners enabled by advanced technology.

The main Lines of Improvement of the Programme are:

- Airspace Configuration Definition and Operational Deployment.
- A Collaborative Decision Making Process (ASM/ATFCM/ATC integration).
- The Rolling Process.
- ASM solutions to improve network performance.
- ASM system support and data management.
- ASM post ops and performance planning.

##### **3.1.2. Programme NOS-02: Airports interface with Network Operations**

Airports need to be seen as being a part of the whole ATM system in a “gate-to-gate” environment. As the tactical manager of the total network load, ATFCM has to collaborate with air traffic control, aircraft operators, and airports in a genuine partnership.

The Programme aims at ensuring an efficient interface between the concerned partners through swift and effective collaborative decision-making and through the provision of the required data when and where they are needed. The Programme also covers the monitoring of airport slots (AMON) and the management of critical events leading to a better utilization of limited available capacity.

##### **3.1.3. Programme NOS-43: ATFCM Planning**

Covering the flow and capacity management several months before the operations, the strategic process will be improved in particular by ensuring the relation with longer-term planning (Airspace Design & Capacity Planning).

The roles, procedures and tools used in the NMOC will be refined for managing efficiently ATFCM scenarios, including the elaboration, validation, negotiation and dissemination of ATFCM measures.

##### **3.1.4. Programme NOS-45: Dynamic ATFCM**

The responsibilities and supporting procedures between NM and the ANSP for the execution of Tactical ATFCM are currently under review to cope with the evolutions of the roles and responsibilities in ATFCM. The Programme will also improve the support to the NM stakeholders (helpdesk, AOLO, etc.) and the access to the NM services in particular for the FMPs (CIFLO, Web services, etc.)

In order to close the gap between ATC and ATFCM, Short-Term ATFCM Measures (STAM) shall be developed requiring dynamic coordination between more than one ACC, the AOs and NM. The objective of STAMs is to prevent sector overloading, whilst reducing delays, by using air traffic flow management techniques, close and during real time operations.

Even if some STAMs measures already exist, they are often limited to solving specific local problems and they do not consider the Network. No standardized tool or procedures exist today to manage STAMs and the role of NM within STAMs processes must be clarified.

The awareness on flight progress shall be improved by getting additional sources of flight data from the Aircraft Operators and the service providers, and by sharing the consolidate information with the partners.

## **3.2. ATM GATEWAY TO NETWORK OPERATIONS**

### **3.2.1. Programme NOS-10: 2012 ICAO FPL Modification**

Some changes to the FPL format have been decided by ICAO and must be in force in November 2012 by the latest in all ATC & ATFM systems. There will be no change to the basic FPL form and the field composition of the FPL remains unchanged, but the content of some fields will be modified. However, the composition of the associated messages (DEP, CHG, etc.) does change. These modifications will lead to significant changes within all flight plan processing systems as well as to data structures affecting all NM systems, in particular in the syntax of messages, the use of new indications in Europe and the update of ADEXP specifications.

### **3.2.2. Programme NOS-21: Free Route Airspace Network-wide**

The aim of the Programme is to adapt the FPL processing systems and processes to cope with the route network evolutions impacting the NM services, such as night DCTs, Week-end DCTs or Free Route Airspace Initiatives.

### **3.2.3. Programme NOS-44: Flight Plan interoperability**

This Programme will enhance the flight plan data exchange between AOs/CFSPs and the Network Manager during the pre-filing phase, in order to improve the accuracy and consistency between 4D flight trajectories maintained by the different stakeholders.

It will re-enforce the validity and consistency of the flight trajectory with the airspace availabilities and constraints, at least until the end of the pre-flight phase.

The Programme will prepare for the further transmission by NM of acquired 4D trajectory information to ATC/ANSP. It will also pave the way to the implementation of the SESAR trajectory concept.

## **3.3. NETWORK INFORMATION MANAGEMENT AND SHARING**

### **3.3.1. Programme NOS-03: Airspace data repository**

The objective of ADR Programme is to develop a virtual Airspace Data Repository (ADR) providing a common and consistent source of airspace information containing both static and dynamic elements that will support the ASM/ATFCM/ATC collaborative process. The ADR will contain information about the past, present and future status of airspace for which a recognized authority has taken a decision in terms of implementation (e.g. AIP data), allocation (e.g. allocated airspace), activation, etc.

The primary purpose of the ADR is to enable all interested parties to have a common view of European airspace data, which is kept up to date in real time throughout the day of operation. To that end, the ADR will provide a unified source of up-to-date and accurate European airspace data to users in the strategic, pre-tactical and tactical phases of ASM and ATFCM & ATC.

The Programme is supporting the alignment between CACD and EAD (SDO), in particular to share information and to allow use of electronic information by external systems (e.g. the electronic RAD message and shortly the eAMI, informing airspace users on the changes made to the airspace). The following ADR evolutions will electronically publish alive updates on airspace data.

### **3.3.2. Programme NOS-24: Demand Data Repository Phase 2**

The objective of the DDR is to allow airspace users to provide their intentions to meet ATM planning requirements: the Traffic Demand will gradually be refined by integrating additional flight intentions (OAG, airport slots, RPLs, FPLs, etc.), allowing predictions based on actual intentions and/or historical operations. The scope of the DDR will vary from a few years until a few hours before the operations.



### **3.3.3. Programme NOS-41: Network Operations Plan**

The NOP aims at building a consolidated interactive view of the network situation that incorporates the existing information and user requests on traffic demand and capacity plans, identifying bottlenecks and presenting the ATFCM and ASM measures foreseen to counterbalance them. The NOP will result from the integration of interdependent data including flight intentions, status of airspace, capacity, airport data and meteorological forecasts. NOP will also be updated taking into account the actual traffic situation and real time flow and capacity management.

### **3.3.4. Programme NOS-48: NM-FOS Prototype validation**

The NM-FOS addresses the systems and operations evolution towards interoperability/flight data sharing amongst all partners involved in the flight. The fundamental idea is that a single logical entity, the FO (Flight Object) is kept up to date by all parties sharing information about a flight. As such, all systems have the most up to date, accurate and consistent view of the flight data and plans. This single logical FO is physically distributed over a network of 'FO Servers (FOS)', each FOS being associated with an FDPS. Each FOS holds physical copies of the FOs of interest to its clients. The network of FOSs, not the clients, is responsible for ensuring that the different physical copies of the FO are kept consistent.

In the pre-departure phase, the FO enables Communicating and Synchronising flight data and agreed trajectories (including strategic and tactical constraints, e.g. TSA closure/opening, TTA/TTO, etc.). When the flight is airborne, up to date FO improves not only the Network view available to controllers, but also allows ATC to participate to the implementation of ATFCM measures. In other words the FO is the opportunity for a better integration of ATFCM and the ATC. The FOS is an enabler not only for the Time Based Operations but also for further evolution to Trajectory Based Operations.

## **3.4. SUPPORT TO PAN-EUROPEAN FUNCTIONS**

### **3.4.1. Programme NOS-12: Call-Sign Similarities (CSST)**

Air-Ground communication safety events are one of the biggest ATM safety priorities, forming 23% of all ATC safety reports. Today, 21% of all NM flights involve callsign similarity. Reliable mitigation for the risk imposed by similar callsigns (like 527F 527D or 361M 369M) can be achieved.

The NM has established a Call Sign Management Cell (CSMC) to develop a centralized Service. One key element in providing the Service is the publication of agreed Call Sign Similarity Rules. These Rules are at the heart of the Call Sign Similarity Tool (CSS Tool). Development of the CSS Tool and its specifications by EUROCONTROL is closely coordinated with a Call Sign Similarity User Group (CSSUG), which includes representations from AOs, ANSPs and other aviation organizations (e.g. ICAO and IATA).

### **3.4.2. Programme NOS-14: Aircraft Identification**

In line with PC/32 decision to organise unambiguous and continuous identification of aircraft through down linked aircraft identification for IFR GAT in ECAC, the three elements CCAMS, ORCAM and Mode S ELS have been brought together to form one Programme named AirCraft Identification Programme.

The current ORCAM system is reaching its limits and SSR Code Conflicts already occur regularly today. The final goal is to have Mode S operational in the whole area but it is not being implemented fast enough to solve the problems at short term. Therefore CCAMS is implemented in some but not all states to overcome those shortages on a temporary basis, until Mode S is implemented everywhere.

### **3.4.3. Programme NOS-42: Alignment to Performance framework**

The aim of this Programme is to align NM post-ops services (including datawarehouse and NMIR) to the NM performance IR. This includes a wide variety of activities such as the adaptation of databases, modification of interfaces graphical identity, new reports following users' requests, etc.

**4. DEPLOYMENT**

| Deployment Plan     | 2013 |   |   |   |   |   |   |   |   |   |   |   | 2014 |   |   |   |   |   |   |   |   |   |   |   |
|---------------------|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|
|                     | J    | F | M | A | M | J | J | A | S | O | N | D | J    | F | M | A | M | J | J | A | S | O | N | D |
| <b>Release 17.0</b> |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |
| OPT                 |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |
| Start of migration  |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |

**4.1. RELEASE 17.0 DETAILED MIGRATION**

The migration of NM systems from NM16.5 to NM17.0 is planned to start on the 13/03/2013.

**Caution: the information contained in the following tables may be updated until the Release Go/NoGo meeting (6<sup>th</sup> of March 2013).**

Modifications in version 2.3.1 and 2.3.2 are in pink underlined font in the tables below.

| Software / Service (Times are UTC)                   | From  | To                      | Remark  |
|--|---|-------------------------|---|
| CHMI software  | New version of CHMI will be available for download as from the 19/02/2013. CHMI Installation guide ( <b>available as from the 19/02/2013</b> ): <a href="http://www.cfm.eurocontrol.int/chmi_appsoft/CHMI/9.0.4/chmiaoinst9.0.4.pdf">http://www.cfm.eurocontrol.int/chmi_appsoft/CHMI/9.0.4/chmiaoinst9.0.4.pdf</a> |                         |   |
| ATFCM CHMI activation (for ANSPs and AOs)            | <u>13/03/2013 21:00</u>   | <u>13/03/2013 23:30</u> | Expected downtime 1h30 + 1h30 provision in case of rollback   |
| CIAM AMC activation                                  | 19/03/2013 16:30  | 19/03/2013 19:00        | -   |
| NOP Portal (CPA) unavailability                      | <u>13/03/2013 21:00</u>   | <u>14/03/2013 00:01</u> | Expected downtime 1h30 + 1h30 provision in case of rollback   |
| NMIR (former CIR) access (BIS system) unavailability | <u>13/03/2013 17:00</u>   | <u>14/03/2013 05:00</u> | -   |
| IFPUV unavailability                                 | 18/03/2013 22:00  | 19/03/2013 00:01        | Expected downtime 1h00 + 1h00 provision in case of rollback   |
| SAFA Service (FAAS system) unavailability            | 18/03/2013 22:00  | 19/03/2013 00:01        | -   |
| CSST service unavailability                          | <u>14/03/2013 00:00</u>   | <u>14/03/2013 23:59</u> | -   |
| B2B Pre-ops system                                   | As from 06/02/2013 22:00  |                         | “Current” will be migrated from NM16 to NM17<br>“Deprecated” will be migrated from NM15 to NM16<br><b>Caution: NM15 will no more be supported in Pre-ops.</b> |
| B2B OPS system                                       | Release CFMU15: As from <u>13/03/2013 21:00</u> , CFMU15 will no more be supported.   |                         |   |
|  | Release CFMU16: The service is already available; it will be interrupted on the <u>18/03/2013 from 22:00 to the 19/03/2013 00:01</u> .  |                         |   |
|  | Release NM17 will be available as from <u>19/03/2013 00:01</u> .  |                         |   |

| System (Times are UTC)                   | From             | To               | Remark  |
|--|------------------|------------------|---|
| <b>ATFCM services</b>                    |                  |                  |   |
| ETFMS, PREDICT, CUA                      | 13/03/2013 21:00 | 14/03/2013 00:01 | Expected downtime 1h30 + 1h30 provision in case of rollback |
| DWH (Datawarehouse)                      | 14/03/2013 00:00 | 14/03/2013 05:00 | -   |
| <b>Flight Plan services</b>              |                  |                  |   |
| IFPS                                     | 18/03/2013 22:00 | 19/03/2013 00:01 | Expected downtime 1h00 + 1h00 provision in case of rollback |
| RPL (Data migration and Reprocessor run) | 13/03/2013 11:00 | 13/03/2013 12:00 | -   |
| RPL (CUA_OPE and CUA_OPF configuration)  | 15/03/2013 11:00 | 15/03/2013 12:00 | -   |
| <b>Update of Environmental data</b>      |                  |                  |   |
| ENV/CACD, ERS, ENV/CACD MAP              | 19/03/2013 16:30 | 19/03/2013 19:00 | On 19/03/2013, no EUUP will be published after 16:00 UTC    |

## 4.2. OPT SESSION

An OPT session is a testing session on specific Functional Blocks that belong to the new Release. It always involves externals and is done to consider eventual impacts on actual operations.

### 4.2.1. Dates

The OPT will take place on 5<sup>th</sup> and 6<sup>th</sup> of February 2013 6<sup>th</sup> and 7<sup>th</sup> of February 2013.

### 4.2.2. Topics

The following areas will be tested:

- IFPS related: FB526, FB550 and FB460.
- NOP related: ~~FB154~~ and FB557 (TB093).
- FB533 might be considered but only as a preparation for the TTA trial.
- CHMI:
  - CIAM (FB527) will be available (on SAT/I) during the OPT.
  - CHMI non-CIAM software will be available as from the 20 February 2013.
- B2B pre-ops will be anticipatively migrated as from the 6 February 2013.
  - **Caution:** B2B pre-ops "Deprecated" will migrate on the same date from the NM15 to the NM16 Release. **The NM15 will thus no more be available in pre-ops.**

### 4.2.3. Access to OPT

Any users wishing to participate to the OPT should request the access by eMail to [nm.customersupport@eurocontrol.int](mailto:nm.customersupport@eurocontrol.int).

CHMI users have to provide their token ID.

CHMI software downloads:

- For FMP users, the CHMI for OPT will be pushed on the FMP PC.
- Non-FMP users shall download the software from the ftp server and install it.

**4.3. VALIDATION EXERCISES**

The following table provides the list of planned SESAR validation exercises. This list is still subject to modifications.

| Date                  | FB           | Title  | Description   | SESAR WP       | Test Platform |
|-----------------------|--------------|--|---|----------------|---------------|
| January-February 2013 | FB360        | <b>Network Impact Assessment trial</b>       | First step is to use current facilities of exchanging simulation between NMOC and external candidates in order to improve the pre-tactical process such as during the FABEC trial.  | -              | NM OPS        |
| May 2013              | No           | <b>Dflex</b>                                 | Departure prioritisation  | 7.6.4          | TBD           |
| May 2013              | FB533        | <b>FAIR STREAM - Part I</b>                  | TTA at congested location sent to aircrew and local Traffic Managers  | SJU / 13.2.3   | NMVP V3       |
| June 2013             | FB544        | <b>VP-659 - FOS trial I</b>                  | The scope of this trial covers the communication of ETOs/TOs. It does not involve communication with the AOC but rather the exchange of information with the IOP ANSP. The NM FOS will exercise the role of FDU and FDC.  | 7.6.2 / 13.2.1 | TBD           |
| June 2013             | FB533        | <b>VP-632 - TTA Ops Trial</b>                | The purpose is to assess the improvement in the flight handling at the airport when the predictability of the arriving flights is improved.   | 7.6.5 / 13.2.3 | NM OPS        |
| September 2013        | FB140, FB529 | <b>VP-522 - STAM Ops Trial II</b>            | Extension of the first STAM trial (Nov 2011) with enhanced processes and facilities for coordinating and applying STAM measures, new types of measures (on flows) and TTA update process  | 7.6.5 / 13.2.3 | NMVP V3       |
| September 2013        | FB499        | <b>VP-616 - Extended FPL Shadow Exercise</b> | This trial is an extension of VP-311, where extended flight plans data are exchanged via Web Services   | 7.6.2 / 13.2.1 | NMVP V3       |
| September 2013        | FB533        | <b>FAIR STREAM - Part II</b>                 | Second part of FAIRSTREAM (the date will rely on the output of Part I)  | SJU / 13.2.3   | NMVP V3       |
| February 2014         | FB570        | <b>Newbridge - TTA supported by AOC data</b> | The trial is an extension of the TTA trial (May 2013) with post-departure trajectories received by the AOs from their airborne flights, are sent to the NM (e.g. via APR) to capture the predicted trajectories in the network view   | 7.6.5 / 13.2.3 | NMVP V3       |
| March 2014            | FB284        | <b>Interops with ASM Tools for real-time</b> | Enabler towards ASM/ATFCM coordination until the real-time activation of airspaces or routes: the purpose is to compare the performance of the network using the today's procedures with the performance when more accurate data are used until the real time airspace activation status.                                       | 7.5.2 / 13.2.1 | TBD           |
| March 2014            | FB514        | <b>Crisis Management Ops Trial</b>           | Validate the use of Dynamically shaped reference locations  | 7.6.5 / 13.2.1 | TBD           |
| April 2014            | No           | <b>OAT FPL</b>                               | Validation of the OAT FPL   | 7.6.2 / 13.2.1 | TBD           |
| December 2014         | FB571        | <b>FOS trial II with TTA</b>                 | The Operational Scenario covers the communication of planned measures (e.g. TTO/TTA) and derived measures (e.g. CTOT) to relevant actors as targets, aiming to ensure that the execution of the flight is performed in line with the plan. During this trial it is intended that the NM FOS will also perform the role of FDMP. | 7.6.2 / 13.2.1 | TBD           |

## 5. NETWORK MANAGER EVOLUTIONS

### 5.1. INTRODUCTION

Each Functional Block is described in a table with the following fields:

| FBxxx: Number and name of the Functional Block |  |
|--|--|
| Users impacted                                 | <p>The categories of NM Users which are impacted by the new features of the Functional Block:</p> <ul style="list-style-type: none"> <li>• AD (Airports, Aerodrome), Airspace Users, MIL, AOs, FMPs, HDLAs (Handling Agents), CFSPs.</li> <li>• AROs, CNAAs (Competent National Aviation Authorities), EASA.</li> <li>• ANSPs (AMC, FMP, ENV coordinator, Tower).</li> <li>• AIS Data Providers (Civil and Military), Commercial AIS Users, AROs, AIS Data Users.</li> </ul>   |
| Objective                                      | Operational objectives of the Functional Block.  |
| Description                                    | Description of the main features delivered to internal and external NM users.  |
| Impact   | Technical or operational impact the Functional Block may have on the users.  |
| <b>Deployment information</b>                  |  |
| Service reference                              | <p>The NM Services to which the Functional Block contributes. NM Services are described in the NM Service Catalogue available on the NM web site: <a href="http://www.eurocontrol.int/nm-services">http://www.eurocontrol.int/nm-services</a>.</p>   |
| Safety assessment                              | <p>Output of the Safety assessment carried out by NM for the Functional Block. There are 5 categories:</p> <p><b>G1: Changes which are not implemented in the operational systems.</b> These changes cover changes to off-line services (like Data Warehouse). These changes per definition do not directly affect the behavior of the operational systems. This group also includes changes, which covers effort to e.g. participate in working groups, selection of future tools, etc., not related to changes to be introduced in a release.</p> <p><b>G2: Changes which are prototyping activities to support the validation of future SESAR concept</b> (like changes associated with the Short Term ATFCM measures (STAM) or Dynamic Demand and Capacity Balancing (dDCB)). These changes will be implemented in dedicated validation environments.</p> <p>Changes, which are to implement new DNM services and which will be subject for separate safety cases. In Release 17.0 and 17.5 changes are introduced which is part of the introduction of the Aeronautical Data Repository Service (ADR).</p> <ul style="list-style-type: none"> <li>• <b>G3a:</b> While the service as such will be subject to a separate safety case, some of the changes allocated to the ADR service can actually be deployed independently and need to be assessed as part of the release. <b>These changes will be subject for a safety assessment as part of the release as they are likely to be operationally deployed before the ADR Service is deployed.</b></li> <li>• <b>G3b:</b> Other changes are specific for the ADR Service (e.g. ability for a DNM Customer to download ADR data). <b>These changes will initially be used for validation purposes and will not be operationally deployed until the safety case has demonstrated that the service is “acceptably safe”.</b> These changes will not be operationally deployed, but only used for validation with selected DNM Customers (not used</li> </ul> |

|                             |  |
|-----------------------------|--|
|                             | <p>operationally by the DNM Customers).</p> <p><b>G4: Changes which are normal changes for a release</b> (e.g. minor improvements to services, correction of defects and deficiencies, technical upgrades of COTS, etc.).</p>                            |
| Operational deployment plan | The activities linked to the deployment, <b>if different of the Release deployment activities</b> .  |
| Documentation publication   | The <b>documentation publication</b> linked to the evolution.  |
| Training sessions           | <b>Training sessions</b> , i.e. the training dates, and the related links for access.  |
| Users' validation           | <p>The sessions organized to assess the new features, in the framework of either an Operational Testing (OPT) session or a Pilot Phase.</p> <p>All FBs goes through the SAT (System Acceptance Testing) process, so it is not mentioned for each FB.</p> |

5.2. RELEASE 17.0

5.2.1. NOS-01 - Coordinated Process for ASM/ATFCM

| FB283: Network Impact Assessment |  |
|----------------------------------|--|
| Users impacted                   | Internal NMOC, Airspace Users, AMCs and FMPs.  |
| Objective                        | <p>Enhanced ASM and ATFCM co-ordination process relies upon a timely and accurate pre-tactical network impact assessment of airspace allocation. The assessment focuses upon improving route and airspace availability to best serve the needs of military and civil airspace users within the context of the anticipated network constraints.</p> <p>This FB has three main objectives:</p> <ol style="list-style-type: none"> <li>1. ASM solutions for congested areas. Promote usage of CDRs/RSAs part of the AUP.</li> <li>2. Flight Efficiency proposals for AO based on usage of CDRs/RSAs part of the AUP.</li> <li>3. Validated/rejected consolidated AUP proposals at internal level to be proposed at external level (AMC/FMP) if needed for Objective 1 and 2. Objective 3 shall follow AUP/UUP time limitations as expressed in the ASM Manual.</li> </ol>   |
| Description                      | <p>Enhance the NMOC tool support for D-1 network impact assessment of airspace allocation. These will include:</p> <ul style="list-style-type: none"> <li>• Improved data handling of operational AUP data in Predict and SIMEX tools.</li> <li>• Improved simulation of CDR and RAD constraints in Predict and SIMEX tools.</li> <li>• Improved Predict MAP tool identification of CDR routings and visualisation of network impacts.</li> <li>• Improved Predict and SIMEX simulated traffic reroutes: enhanced with more historic City pair routes and finer tuning of CDR and RAD constraints.</li> <li>• Improved data and trend analysis of historical AUP/UUP statistics.</li> </ul> <p>ASM/MIL benefits: improved civil and military information sharing.</p> <p>Airspace Users benefits:</p> <ul style="list-style-type: none"> <li>• Network configurations that respond to Airspace Users needs.</li> <li>• More opportunities to improve individual flight efficiency.</li> </ul> <p>NMOC/ATFCM benefits:</p> <ul style="list-style-type: none"> <li>• New AUP solutions to mitigate ATFCM hotspots.</li> <li>• Participation in AUP decision making process promoting efficient Network configurations to balance local and/or sub-regional airspace needs.</li> <li>• An improved understanding of the Airspace User needs.</li> <li>• Balancing the impacts of improvements in one area against other areas and the network.</li> </ul> |
| Impact                           | No impact for external.  |
| <b>Deployment information</b>    |  |
| Service reference                | <a href="#">ID S212 - Airspace Real-Time Simulation</a>  |
| Safety assessment                | G4: Changes which are normal changes for a Release.  |
| Operational                      | The FB will be deployed first on a test chain from 15 <sup>th</sup> of January. Test and   |

|                           |   |
|---------------------------|---|
| deployment plan           | operational validation sessions are planned for January - February 2013 period.<br>If approved, the FB will be deployed along with the Release. |
| Documentation publication | High-level procedures (part of the <i>Network Impact Assessment Process</i> document) will be updated.  |
| Training sessions         | One training session per week will be organized for the MILO and NMC.<br>Internal training on CIAM will be provided.                            |
| Users' validation         | The FB will be available for validation on a test chain from January 2013 until March 2013.   |

**5.2.2. NOS-03 - Airspace Data Repository - Phase 1**

|   |  |
|---|--|
| <b>FB556: eRestrictions (including FPR)</b> |  |
| Users impacted                              | AOs, CFSPs and ATFM  |
| Objective                                   | To contribute to end user's goal of filing fewer incorrect FPLs to NM IFPS.  |
| Description                                 | AOs and CFSPs do not have access to all Flow restrictions used during flight plan validation: Invalid Flight Plans being difficult to correct by AO's as they do not know the contents of the Flow restriction that they need to respect.<br>The objective is to make available to the airspace users the restrictions including Flight Profile Restrictions (FPLs) used by flight plan validation in order for them to have fewer invalid FPLs. The deployment will be done in AIXM 4.5 and through ftp server. |
| Impact                                      | Impact on client application interfaces in order to process this data  |
| <b>Deployment information</b>               |  |
| Service reference                           | <a href="#">ID S334 - Airspace Data Management</a>   |
| Safety assessment                           | G3b: These changes will initially be used for validation purposes and will not be operationally deployed until the safety case has demonstrated that the service is "acceptably safe".   |
| Operational deployment plan                 | The FB will be deployed along with the Release.  |
| Documentation publication                   | The eRestrictions by ftp server User Access Manual will be updated by NM-NTS.<br>The eRAD Conceptual Guidelines is under review.   |
| Training sessions                           | None   |
| Users' validation                           | A limited validation with an external client will be on-going during SAT testing.  |

|  |   |
|--|---|
| <b>FB569: SDO Download - EAD / CACD Comparison</b> |   |
| Users impacted                                     | CACD, ADS, <del>AOs, CFSPs and ASM Tools</del>  |
| Objective  | Development of an internal tool named "CASTAR" (Computer Aided Synchronization Tool for Airspace Repositories) to automate data comparison between EAD SDO and CACD.    |
| Description  | This FB includes coupling and comparing of CACD data with EAD data within the agreed scope - Aerodromes and Points in a geographical area determined by the user (ADS). |
| Impact   | Impact mainly on CACD/ADS to provide higher data quality within CACD.<br>No impact for external stakeholders.   |
| <b>Deployment information</b>                      |   |
| Service reference                                  | <a href="#">ID S334 - Airspace Data Management</a>  |



|                             |  |
|-----------------------------|--|
| Safety assessment           | G3b: These changes will initially be used for validation purposes and will not be operationally deployed until the safety case has demonstrated that the service is “acceptably safe”. |
| Operational deployment plan | First step of deployment covers Aerodromes and Points (NM17).  |
| Documentation publication   | Internal documentation available.  |
| Training sessions           | Organised within ADS team.   |
| Users’ validation           | Done via two cycle of SAT/OPS testing sessions.  |

**FB572: Prepare Ops Validation with ASM Tools**

|                |   |
|----------------|---|
| Users impacted | ASM Tools   |
| Objective      | Prepare the OPS deployment for the full interoperability between NM and ASM Tools   |
| Description    | This FB will bring two new B2B services to obtain the manageable Route Segments for an AMC.<br>It will also complete the configuration of the Pre-OPS testing platform. |
| Impact         | Impact mainly on ASM Tools to develop interfaces benefiting from the above services   |

**Deployment information**

|                             |  |
|-----------------------------|--|
| Service reference           | <a href="#">ID S334 - Airspace Data Management</a>   |
| Safety assessment           | G3a: These changes are part of the release safety assessment as they are likely to be operationally deployed before the ADR Service is deployed.                       |
| Operational deployment plan | The FB will be deployed along with the Release   |
| Documentation publication   | <ul style="list-style-type: none"> <li>B2B Refence Manual will be updated.</li> <li>Improvements to documentation of AIXM Extension are planned for NM17.5.</li> </ul> |
| Training sessions           | None.  |
| Users’ validation           | The B2B data export and ASM services is currently in a pilot phase. Communication with Customers of this service is on-going and constant.                             |

**5.2.3. NOS-12 - Call-Sign Similarity (CSST)**

**FB568: CSST C&T**

|                |  |
|----------------|--|
| Users impacted | AOs, CSMC  |
| Objective      | Correction and tuning of delivered functionality in 16.5 (Single AO-Deconfliction) plus small remaining functionality  |
| Description    | <p>User interface:</p> <ul style="list-style-type: none"> <li>New button enables return to the state prior to auto-deconflict.</li> <li>User is no longer required to enable Caps Lock before input of queries.</li> <li>View Name is now visible in all windows during workflow so navigation is easier.</li> <li>User is no longer obliged to backup View data from previous CSST release. Views are now visible across releases.</li> </ul> <p>Operational function:</p> <ul style="list-style-type: none"> <li>CSST by default, will not output solutions using leading zeroes unless un-</li> </ul> |

|                               |  |
|-------------------------------|--|
|                               | <p>flagged by user.</p> <ul style="list-style-type: none"> <li>CSST will now use next flight AO designator when the next flight AO is different from original flight AO designator.</li> <li>CSST will now read new column formats to enable AO to upload next flight details within schedule files.</li> <li>CSST will now take into account CFN suffix when grouping flights. (XXX103J and XXX103 will not be handled as same aircraft).</li> <li>CSST will now group flights during upload rather than during initialisation. This facilitates Back-End operation so it is transparent to user.</li> </ul> <p>Administration:</p> <ul style="list-style-type: none"> <li>CSMC can see conflicts according to Original Flight ID and then compare with new Flight ID. This facilitates a more realistic sanity check.</li> </ul> |
| Impact                        | <p>On systems: only CUA.</p> <p>For users' perspective: Application more robust, more friendly <del>and accessible from the NOP portal URL.</del></p>  |
| <b>Deployment information</b> |  |
| Service reference             | <a href="#">ID S321 - CSS Service - Call Sign Similarity Service</a>   |
| Safety assessment             | G4: Changes which are normal changes for a Release.  |
| Operational deployment plan   | The FB will be deployed along with the Release.  |
| Documentation publication     | <ul style="list-style-type: none"> <li>CSST user guide will be updated and sent to registered user of CSST.</li> <li>NOP on-line help will be updated.</li> <li>CSST release notes have been updated and distributed.</li> </ul>   |
| Training sessions             | <ul style="list-style-type: none"> <li>No dedicated training is planned.</li> <li>Demonstration of part of new features has been given during user group meetings.</li> </ul>  |
| Users' validation             | No validation planned.   |

#### 5.2.4. NOS-14 - AirCRAFT IDentification

|   |  |
|---|--|
| <b>FB537: Post-Deployment CCAMS C&amp;T - 2</b> |  |
| Users impacted                                  | NM internal operations, <a href="#">CCAMS units</a>  |
| Objective                                       | Correction and tuning of features delivered in previous Release  |
| Description                                     | <p>This Functional Block fixed some issues mainly on the back-end systems, on the business rules used by CCAMS and increases safety, contingency and efficiency. It will:</p> <ul style="list-style-type: none"> <li>Reduce the risk of code shortage.</li> <li>Improve assignment logic.</li> <li>Fix some safety issues.</li> <li>Improve the contingency of CCAMS systems: NOP Portal can be used in contingency situation to display SSR codes information.</li> </ul> |
| Impact  | No external impact except on the flight list displays in the NOP Portal.   |
| <b>Deployment information</b>                   |  |
| Service reference                               | <a href="#">ID S143 - CCAMS (Centralised SSR Code Assignment and Management System)</a>  |
| Safety assessment                               | G4: Changes which are normal changes for a Release.  |

|                             |   |
|-----------------------------|---|
| Operational deployment plan | The FB will be deployed along with the Release.   |
| Documentation publication   | Portal Help will be updated<br>Contingency procedures will be amended.<br>CCAMS User Manual will be updated.                        |
| Training sessions           | Main users receive information via the CCAMS User Group.<br>However, some general briefings are also given during the NM Users Day. |
| Users' validation           | Internal changes so validation done through internal SIT/SAT.   |

### 5.2.5. NOS-21 - Free Route Airspace Network-wide

| <b>FB526: FRA Improvements</b> |  |
|--------------------------------|--|
| Users impacted                 | CHMI users, AOs, CFSPs, <del>CRGO</del> and ATFM   |
| Objective                      | <ul style="list-style-type: none"> <li>To improve the FRA network implementation.</li> <li>To facilitate the maintenance of FRA Restrictions.</li> <li>To ease and speed up the correction of Flight Plans.</li> </ul>   |
| Description                    | <ul style="list-style-type: none"> <li>In order to facilitate FPL corrections by IFPS operators and pro-active solutions (AOLO) to AOs, the map will allow presentation of the FRA points of the FRA airspaces that the profile plotted is crossing.</li> <li>CHMI Map Display will include the temporality FL range for correcting/validating FPL's.</li> </ul> |
| Impact                         | The quality of the NM FRA infrastructure will be higher.<br>The impact on HMI is high; however changes to back-end systems are limited to technical code refactoring.  |
| <b>Deployment information</b>  |  |
| Service reference              | <a href="#">ID A211 - European Route Network Improvement Plan (ERNIP)</a><br><a href="#">ID S334 - Airspace Data Management</a>  |
| Safety assessment              | G4: Changes which are normal changes for a Release.  |
| Operational deployment plan    | The FB will be deployed along with the Release.  |
| Documentation publication      | CHMI MAP user guide will be updated; no change in procedures so the eRAD user guide will not be impacted.  |
| Training sessions              | Internal training sessions will be organised.  |
| Users' validation              | An OPT is planned for this FB (cf §4.2).   |

### 5.2.6. NOS-41 - Network Operations Plan

[Update v2.0] FB560 (Real time network situation displays) removed from Release 17.0; its features have been included in the Technical Block TB100 (Map display for the NOP) planned for Release 17.5.

| <b>FB557: NM customisable platform for all users</b> |   |
|--|---|
| Users impacted                                       | NOP Portal users  |
| Objective  | <p>The NOP Portal intends to be the window on Network Manager processed and services. By 2016, the look &amp; feel and ease of use will reflect this. The roadmap until then includes changes aiming to:</p> <ul style="list-style-type: none"> <li>Improve the general usability of the portal, both from the provision and the retrieval of information.</li> <li>Provide personalisation.</li> </ul> |

|             |   |
|-------------|---|
|             | <ul style="list-style-type: none"> <li>• Provide views of the NOP adapted to different roles.</li> <li>• Provide better access from mobile devices.</li> </ul>  |
| Description | <p>The first step delivered with this release will provide:</p> <ul style="list-style-type: none"> <li>• <del>Reinforced usability.</del></li> <li>• <del>The possibility to customize the interface via a support to user in working environment personalization.</del></li> <li>• <del>The introduction of workspace concept in NOP Portal.</del></li> <li>• <del>Evolution of navigation base on different ATFM phases to an Application Desktop in the NOP Portal.</del></li> <li>• Persist Counts customizations: the customisations of the Counts application will persist in user preferences (colors, piling up order, etc.), stored centrally into NM systems in order to retrieve them where ever the user logs with the same token. It is implemented to better answer ATFCM monitoring needs.</li> <li>• Allow to Show / Hide columns in lists: when displaying a list of data (ex Flight Lists), the customer will be able to customise the list of displayed columns (Show/Hide). Such configuration will persist thanks to a central storage into NM systems.</li> <li>• Preference editor: a preference editor is implemented into the Portal to support the implementation of HMI customisation.</li> <li>• Central storage for Customisation parameters: A central storage of HMI Customisation parameters is developed, allowing retrieving the defined configuration when logging in from any device, using the same token.</li> <li>• Customisation of visible main views on main pages: When an authenticated customer customises the set of main views on each main page, this customisation is centrally stored for persistence purpose.</li> </ul> |
| Impact      | NOP Portal usage procedure to be adapted to the various evolution of the interface. This will be addressed during Operational Trial before migration.   |

**Deployment information**

|                             |   |
|-----------------------------|---|
| Service reference           | <a href="#">ID P348 - Network Operations Portal</a>               |
| Safety assessment           | G1: Changes which are not implemented in the operational systems. |
| Operational deployment plan | The FB will be deployed along with the Release.                   |
| Documentation publication   | The NOP Web-based help will be updated.                           |
| Training sessions           | No training.  |
| Users' validation           | An OPT is planned for this FB (cf §4.2).                          |

**FB584: Updating the NOP, CHMI and Login page banners**

|                |  |
|----------------|--|
| Users impacted | Users of NOP, NMIR and CHMI  |
| Objective      | Update the NOP, NMIR and CHMI to the new NM logo and banners.  |
| Description    | Update of logo, banners, icons and text in the NOP and CHMI applications to cope with the new naming of these tools. |
| Impact         | The impact will be only visual on the interface; no features will be modified.                                       |

**Deployment information**

|         |   |
|---------|---|
| Service | <a href="#">ID P348 - Network Operations Portal</a> |
|---------|---|

|                             |   |
|-----------------------------|---|
| reference                   | <a href="#">ID P349 - CHMI (Collaboration Human Machine Interface) Applications</a> |
| Safety assessment           | G4: Changes which are normal changes for a Release.                                 |
| Operational deployment plan | The FB will be deployed along with the Release.                                     |
| Documentation publication   | No change in documentation.   |
| Training sessions           | No training.  |
| Users' validation           | No validation.  |

**5.2.7. NOS-42 - Alignment to Performance framework**

**FB456: Alignment to Performance framework (1/3)**

|                |  |
|----------------|--|
| Users impacted | CRCO   |
| Objective      | Improve the CRCO daily FTP export.   |
| Description    | <p>CRCO (R2) is involved in the Emissions Trading Scheme project in partnership with the EU and requires the total actual route length to be added to the flight list.</p> <p>The FB will:</p> <ul style="list-style-type: none"> <li>• Add field ARU_FLT.FLT.FLT_C_RTE_LEN at end of flight table records (i.e. after CURRENT_ARRIVAL_AD_ICAO_ID)</li> <li>• Provide CRCO R2 and NM with explanations / documentation on how exactly this route length is calculated (more particularly regarding route portions outside the IFPS area).</li> </ul> |
| Impact         | The FB will provide new data to CRCO   |

**Deployment information**

|                             |   |
|-----------------------------|---|
| Service reference           | <a href="#">ID S315 - Load and capacity management</a>            |
| Safety assessment           | G1: Changes which are not implemented in the operational systems. |
| Operational deployment plan | The FB will be deployed along with the Release.                   |
| Documentation publication   | SRD document (internal) updated.                                  |
| Training sessions           | No training planned.  |
| Users' validation           | A set of data has been produced for test purposes.                |

**FB456: Alignment to Performance framework (2/3)**

|                |   |
|----------------|---|
| Users impacted | NMIR users and users of "list of exempted flights" report   |
| Objective      | <ul style="list-style-type: none"> <li>• Adapt the NMIR layout to the new name (NMIR instead of CIR)</li> <li>• Improve existing reports dedicated to the exempted flights in the scope of the ATFM IR.</li> </ul>  |
| Description    | <ul style="list-style-type: none"> <li>• Change of the banner: NMIR banner instead of CIR banner.</li> <li>• Improve the "List of exempted flights" report by aligning this flight list with the one sent to the members states in the scope of the ATFM IR.</li> </ul> |
| Impact         | <p>This FB will align NMIR with ATFM IR and with the new graphical layout of NM.</p> <p>The report "list of exempted flight" and its content will be modified (one</p>  |

|                             |   |
|-----------------------------|---|
|                             | column added): only the “terminated plan” will be listed.         |
|                             | <b>Deployment information</b>                                     |
| Service reference           | <a href="#">ID S315 - Load and capacity management</a>            |
| Safety assessment           | G1: Changes which are not implemented in the operational systems. |
| Operational deployment plan | The FB will be deployed along with the Release.                   |
| Documentation publication   | The web-based help shall still be updated.                        |
| Training sessions           | No training planned   |
| Users' validation           | No validation planned   |

**FB456: Alignment to Performance framework (3/3)**

|                |  |
|----------------|--|
| Users impacted | CHMI users   |
| Objective      | Correct a problem of retrieval of delay figures.   |
| Description    | The regulation delay is wrongly retrieved, so the FB aims to correct the problem: the regulation delay was wrongly displayed in the CHMI for regulation over-midnight. |
| Impact         | Positive impact as it corrects an existing problem.  |

**Deployment information**

|                             |  |
|-----------------------------|--|
| Service reference           | <a href="#">ID S315 - Load and capacity management</a>                                     |
| Safety assessment           | G1: Changes which are not implemented in the operational systems.                          |
| Operational deployment plan | Caution: The deployment in NM17.0 of this part of the FB (3/3) still need to be confirmed. |
| Documentation publication   | No documentation publication updated.  |
| Training sessions           | No training planned  |
| Users' validation           | No validation planned  |

**5.2.8. NOS-43 - ATFCM Planning**

**FB360: Scenario Data management**

|                |  |
|----------------|--|
| Users impacted | NOP users participating to the Network Impact Assessment trial   |
| Objective      | To improve SIMEX access and tools available to pre-tactical FMPs   |
| Description    | <p>Caution, the scope is currently under review:</p> <ul style="list-style-type: none"> <li>● <del>FMP initiation of a Predict SIMEX session (17.0).</del></li> <li>● <del>FMP edition of a Predict SIMEX regulation (17.x).</del></li> <li>● <del>FMP proposal of a Predict regulation via Predict SIMEX (17.x).</del></li> </ul> <p>The FB will add a button into the NOP to launch a SIMEX session in a new window.</p> |
| Impact         | No impact for the external user: Only those FMPs involved in the trial will get the button.  |

**Deployment information**

|         |  |
|---------|--|
| Service | <a href="#">ID S315 - Load and capacity management</a> |
|---------|--|

|                             |   |
|-----------------------------|---|
| reference                   |   |
| Safety assessment           | G4: Changes which are normal changes for a Release.                           |
| Operational deployment plan | The FB will be deployed along with the Release.                               |
| Documentation publication   | No update to the NOP web-based documentation as it is to be used for a trial. |
| Training sessions           | No training planned.  |
| Users' validation           | No validation.  |

**5.2.9. NOS-44 - Flight Plan interoperability**

|  |   |
|--|---|
| <b>FB460: Increase planned flight trajectory consistency between AO and NM</b> |   |
| Users impacted   | Aircraft Operators, Flight Planning Service Providers, <del>Aerodrome Reporting Offices</del> ARO   |
| Objective  | Increase performance of flight planning and ATFCM operations.   |
| Description  | <p>This functional block contains a number of developments that are intended to increase flight trajectory consistency through a more extensive use of flight plan information already foreseen to be included in a filed flight plan in ICAO format as well as through the addition of some new flight plan data elements. It includes the following developments:</p> <ol style="list-style-type: none"> <li>1. The IFPS shall use estimated elapsed time (EET) information provided within the filed flight plan or associated messages for the calculation of flight trajectories. Prior to using this information, the IFPS shall validate it against its own calculated EETs allowing for the provided EET to be within a pre-defined window around its calculated EET. EET values that fail this checking shall be ignored. They will not lead to the invalidation of the message. It should be noted that, with this change, the provision and updating of EET information within flight plan messages submitted to IFPS becomes an important means to ensure the IFPS calculated trajectory of a flight is synchronised in time with the trajectory calculated by the operator of the flight for the same flight, with a direct impact on the IFPS flight plan validation process.</li> <li>2. It shall be possible for flight plan originators to include within the Field 18 RMK/ element of an ICAO format flight plan transmitted to IFPS the following data: <ul style="list-style-type: none"> <li>• Estimated taxi time</li> <li>• Top-of-climb (TOC) information for every transition from a climb phase to a cruise phase</li> <li>• Top-of-descent (TOD) information for every transition from a cruise phase to a descent phase</li> <li>• Bottom-of-climb (BOC) information for every transition from a cruise phase to a climb phase</li> <li>• Bottom-of-descent (BOD) information for every transition from a descent phase to a cruise phase</li> <li>• Distance at location (DAL)</li> <li>• Take-off weight (TOW)</li> </ul> <p><u>Taxi time</u> shall be indicated using the format: TAXI:&lt;(hh)mm&gt;<br/>&lt;(hh)mm&gt; is the estimated taxi time in hours and minutes, with the hours optional. The hours are compulsory for taxi times of duration longer than 59 minutes.</p> <p><u>TOC, TOD, BOC or BOD</u> shall be indicated using the format:</p> </li> </ol> |

|               |  |
|---------------|--|
|               | <p>TOC:&lt;distance&gt;&lt;level&gt;&lt;eet&gt;<br/> TOD:&lt;distance&gt;&lt;level&gt;&lt;eet&gt;<br/> BOC:&lt;distance&gt;&lt;level&gt;&lt;eet&gt;<br/> BOD:&lt;distance&gt;&lt;level&gt;&lt;eet&gt;</p> <p>&lt;distance&gt; is the projected distance on the ground from take-off to the point where the TOC/TOD/BOC/BOD is reached expressed in nautical miles preceded by the letter “D”;</p> <p>&lt;level&gt; is the estimated level at the TOC/TOD/BOC/BOD expressed as in Field Type15b;</p> <p>&lt;eet&gt; is the elapsed time from take-off to TOC/TOD/BOC/BOD in hours and minutes (hhmm) preceded by the letter “T”.</p> <p>The estimated level at the TOC/TOD/BOC/BOD should be equal to the requested cruising level on the route segment where it applies. Otherwise IFPS will ignore that TOC/TOD/BOC/BOD instance without raising an error.</p> <p><u>Distance at location</u> shall be indicated using the format:<br/> DAL:&lt;distance&gt;&lt;location&gt;.</p> <p>&lt;distance&gt; is the projected distance on the ground from take-off to the location <b>expressed in nautical miles</b> preceded by the later “D”.</p> <p>&lt;location&gt; is the published designator of the location preceded by the letters “PT” or “AD”. The location may be either a point (PT) or the aerodrome of destination (AD).</p> <p>The corresponding ICAO 2 to 5 letters designator shall be indicated for a point. Only points that have a published designator may be indicated. They have as well to be part of the planned route of the flight.</p> <p>The ICAO four-letter indicator shall be indicated for the aerodrome of destination.</p> <p><u>Take-off weight</u> shall be indicated using the format: TOW:&lt;weight&gt;<br/> &lt;weight&gt; is the total weight of the aircraft at take-off in kilograms.</p> <p>All new indicators shall be separated from other text included in RMK/ and between them by a space or end of line separator.</p> <p>Example:<br/> -EET/EDUU0012 EDVV0016 EBUR0046 LFFF0056 DOF/130601<br/> RVR/200 RMK/TRAINING FLIGHT TAXI:15 TOC:D118F280T0020<br/> TOD:D546F280T0122 DAL:D480PTNIPOR TOW:64290</p> |
| <p>Impact</p> | <p>Flight plan originators will need to adapt their systems and/or procedures in order to take advantage of the features implemented under this functional block.</p> <p>No error shall be raised for syntactically invalid indicators within RMK/. They will not be recognised by IFPS and therefore be ignored. All new information is optional. However, when included in the filed flight plan, the more information is provided the higher is expected to be the consistency of the calculated flight trajectories between NM and the originator of the flight plan. Therefore it is highly recommended to provide as much of it as possible. TOC/TOD/BOC/BOD information will be used by the NM systems only when the distance DAL/ at the aerodrome of destination is provided as well, as a minimum. Without it the use of TOC/TOD/BOC/BOD information alone may lead to an increase of inconsistency between trajectories.</p> <p>For messages transmitted via the AFTN network, due attention should be paid to the total length of the resulting flight plan message that should not exceed 1800 characters.</p> <p>The new flight plan data is intended to be used by the NM systems for flight trajectory calculation and, at least initially, be removed from NM output</p>  |



|                               |  |
|-------------------------------|--|
|                               | messages in order to avoid any possible impact on NM client systems.<br>Information provided within the TOC, TOD, BOC, BOD and DAL indicators will be used by the NM systems only for flights that are entirely IFR/GAT and containing no STAY segments.   |
| <b>Deployment information</b> |  |
| Service reference             | <a href="#">ID S325 - Flight Plan Processing and Distribution</a>  |
| Safety assessment             | G4: Changes which are normal changes for a Release.  |
| Operational deployment plan   | The TOC, TOD, BOC, BOD and DAL indicators will be deployed initially on a trial basis. Pending on the results of the trial, they may later on be declared operational.<br>The other developments included in this functional block are planned to go operational as soon as their corresponding Release is deployed to operations. |
| Documentation publication     | IFPS user manual will be updated.  |
| Training sessions             | Training will be included in the normal IFPS training.   |
| Users' validation             | An OPT is planned for this FB (cf §4.2).   |

**FB499: Use of AO 4D profile - Prototype**

|                |   |
|----------------|---|
| Users impacted | Participants to the SESAR validation exercise EXE-07.06.02-VP-311.  |
| Objective      | Evaluate the impact of the Extended Flight Plan (EFPL) concept on the flight plan validation by IFPS.   |
| Description    | The Extended Flight Plan concept refers to the enrichment of the current flight plan content with the 4D trajectory of the flight, as calculated by the originator of the flight plan, as well as climb / descent performance data in the conditions of the flight.<br>Further details regarding this concept are provided within the Operational Service and Environment Definition (OSD) document of the SESAR Work Package Business/ Mission Trajectory Management (WP7.6.2).<br>The prototype built under this functional block is intended to support an off-line validation exercise of the Extended Flight Plan concept. |
| Impact         | Participants to the validation exercise will have to adapt their systems in order to produce Extended Flight Plans.   |

**Deployment information**

|                             |   |
|-----------------------------|---|
| Service reference           | <a href="#">ID S325 - Flight Plan Processing and Distribution</a> |
| Safety assessment           | Safety assessment under review by SESAR team.                     |
| Operational deployment plan | Not available yet. It is a prototype.                             |
| Documentation publication   | Validation plan available to participants to the exercise.        |
| Training sessions           | Not available yet. It is a prototype.                             |
| Users' validation           | Not available yet. It is a prototype.                             |

**FB554: FIXM Strategy in SESAR**

|                               |  |
|-------------------------------|--|
| Users impacted                | Internal NM systems  |
| Objective                     | Align NM systems with FIXM roadmap   |
| Description                   | This FB is an envelop covering the NM engineering resources needed for the follow-up, interaction and alignment with the FIXM roadmap in 2012. |
| Impact                        | No external impact (no deliverables to the externals).   |
| <b>Deployment information</b> |  |
| Service reference             | This FB covers R&D activities that are not cover yet by a Service.   |
| Safety assessment             | G1: Changes which are not implemented in the operational systems.  |
| Operational deployment plan   | No Deployment  |
| Documentation publication     | -  |
| Training sessions             | -  |
| Users' validation             | -  |

**5.2.10. NOS-45 - Dynamic ATFCM**

|  |  |
|--|--|
| <b>FB533: Support TTA Trial (May 2013)</b> |  |
| Users impacted                             | Official SESAR WP7 trial participants (NMOC, Airspace Users, Flight Crew, FMPs - possibly ATC en-route, tower)   |
| Objective                                  | <ul style="list-style-type: none"> <li>To determine the feasibility of calculating and communicating target times at regulation hot spots. To measure flight crew adherence to flight execution phase targets.</li> <li>To measure benefits of improved flight execution phase predictability.</li> <li>To identify concept deficiencies.</li> </ul> |
| Description                                | New optional flight list columns containing the new target values will be added to the ETFMS, NOP and CHMI. These columns will contain the flight target values and flight adherence measures.<br>Please refer to SESAR OSED WP7.6.5 concept and §4.3.   |
| Impact                                     | The week long operational trial(s) will be limited to approx. one ATFCM regulation per weekday. Participating airlines and ANSPs will be impacted by the HMI (ETFMS and NOP only) and procedural changes.  |
| <b>Deployment information</b>              |  |
| Service reference                          | <a href="#">ID S315 - Load and capacity management</a>   |
| Safety assessment                          | G2: Changes which are prototyping activities to support the validation of future SESAR concept that will be deployed in dedicated validation environments.   |
| Operational deployment plan                | The FB will be deployed along the Release process.   |
| Documentation publication                  | Documentation (BSR and TSR) under finalization (trial is in May 2013)  |
| Training sessions                          | Training will be handled within the Fair Stream SESAR Trial.<br>Training will also be covered for the VP-632 - TTA Ops Trial (not part of Fair stream).  |
| Users' validation                          | Covered in trial organisation.   |

5.2.11. NOS-48 - NM-FOS Prototype validation

| FB544: Initial Flight Object Prototype - 1 |  |
|--|--|
| Users impacted                             | NMVP or DEV/Test Platform  |
| Objective                                  | Development of the NM-FOS (Flight Object Server) Prototype and the integration of the NM in the FOS network.<br>Exchange of Flight data (including ATFM constraints (i.e. target times)) with an ATC IOP (InterOPERability) systems by means of FO.  |
| Description                                | A joint initiative between DNM, Indra and MUAC to enhance the current DNM systems with the capabilities to interoperate by means of using the FO and perform a SESAR verification exercise involving the MUAC ATC and DNM systems.<br>The technical verification/validation exercise planned for Q2 or Q3 2013 will perform the preparatory work for an operational exercise to take place in 2014 with simulated traffic (subject of FB571 – NM18). |
| Impact                                     | No impact on Ops systems as the exercise will involve the “off-line” test systems.<br>(Prototyping aims to reduce the impact on the systems when the functionality goes operational and to refine the technical architecture options for the NM integration in the FOS network)  |
| <b>Deployment information</b>              |  |
| Service reference                          | <a href="#">ID P3411 - Data distribution</a>   |
| Safety assessment                          | G2: Changes which are prototyping activities to support the validation of future SESAR concept that will be deployed in dedicated validation environments.   |
| Operational deployment plan                | The deployment of this FB will be done along the Release deployment.   |
| Documentation publication                  | Documentation is handled by the SESAR WP13 Programme.  |
| Training sessions                          | No training.   |
| Users' validation                          | It will be done during the trials.   |

5.2.12. ATFCM Domain

| FB524: ATFCM Domain improvements |  |
|----------------------------------|--|
| Users impacted                   | NMOC (ATFCM teams)   |
| Objective                        | To improve ATFCM service quality by local enhancement of internal NMOC tools   |
| Description                      | <ul style="list-style-type: none"> <li>• Determine the validity period for each reroute Opportunity for flight efficiency.</li> <li>• Reducing the repetitive workload associated with Reroute proposals (RRP) by enabling the group sending of RRP.</li> <li>• <del>Reduce time spent editing Exceptional Condition regulation AIM messages by automatically generating and sending them.</del></li> <li>• Improve the linking of regulations by system detection and alert of geographically independent regulations that should be manually linked.</li> <li>• Tuning the ETFMS tools that identify flights pushed by their regulation delay into restricted airspace.</li> <li>• Removing obsolete network effects from Predict traffic demand.</li> <li>• Improving User readability of regulation operational logs.</li> </ul> |

|                               |   |
|-------------------------------|---|
|                               | <ul style="list-style-type: none"> <li>• <del>Automatic generation of Regulation Names.</del></li> <li>• Improvements to the filtering and sorting capability of ETFMS displays.</li> </ul> |
| Impact                        | The immediate impact will be to improve NMOC internal tool capability that supports Network Management service provision to ANSPs and AOCs.   |
| <b>Deployment information</b> |   |
| Service reference             | <a href="#">ID S315 - Load and capacity management</a>  |
| Safety assessment             | G4: Changes which are normal changes for a Release.   |
| Operational deployment plan   | FB will be deployed along with the Release process.   |
| Documentation publication     | "Re-routing opportunity" documentation will be updated.   |
| Training sessions             | No external planning planned.   |
| Users' validation             | No validation planned.  |

### 5.2.13. Flight Planning Domain

|  |   |
|--|---|
| <b>FB550 (1/5): IFPUV - Highlight errors associated to known anomalies</b> |   |
| Users impacted   | Aircraft Operators, Flight Plan Message Originators, Computer Flight Plan Service Providers   |
| Objective  | Indicate to IFPUV Users (NOP and B2B) that the FPL that is raising an error in IFPUV may be manually accepted by IFPS Staff.  |
| Description  | <p>When an error is displayed in the NOP Portal IFPUV that has been tagged by IFPS as a known anomaly caused by IFPS software or data limitation, the error will be highlighted in red and the text "WARNING: DUE TO A POSSIBLE ANOMALY, THIS MESSAGES MAY REQUIRE SPECIAL HANDLING IN IFPS" shall be displayed.</p> <p>When an error is or sent in reply to a B2B IFPUV query, the reply will be sent with a new flag to indicate the possibility of special handling in IFPS.</p> |
| Impact   | Users will know that they may have their FPL accepted by IFPS even though there is an error when validating via IFPUV.  |
| <b>FB550 (2/5): Relax error reporting during IFPS profile checking</b>     |   |
| Users impacted   | Aircraft Operators, Flight Plan Message Originators, Computer Flight Plan Service Providers   |
| Objective  | Reduce number of ROUTE DOES NOT EXIST errors  |
| Description  | IFPS may report the ROUTE DOES NOT EXIST error when the profile is in cruise or when the route portion is completely within undefined airspace (no route exists). The decision to report the error is controlled by parameters that will be adjusted to relax the check and reduce the number of occurrences that the error is reported.  |
| Impact   | Less invalid flight plan messages and reduced workload for IFPS Staff.  |
| <b>FB550 (3/5): Send route proposal with IFPS REJ Message</b>              |   |
| Users impacted   | Aircraft Operators, Flight Plan Message Originators, Computer Flight Plan Service Providers   |
| Objective  | Improve flight planning assistance  |
| Description  | When a FPL is rejected (automatic and manual) by IFPS for Profile or Routing Errors, a route proposal will be automatically generated and added   |

|        |  |
|--------|--|
|        | to the REJ Operational Reply Message.<br>The proposal will be added in the field 'POS RTE'. The field will not be present in the REJ message if no alternative route can be found by IFPS. |
| Impact | Assist flight plan message originators in finding alternative routes and reduced workload for IFPS Staff.  |

**FB550 (4/5): Consistent Content of REJ Message**

|                |   |
|----------------|---|
| Users impacted | Aircraft Operators, Flight Plan Message Originators, Computer Flight Plan Service Providers   |
| Objective      | Improve quality of IFPS REJ reply messages  |
| Description    | When IFPS sends a REJ message the flight plan data that it contains is always the message as filed by the originator. When IFPS Staff have solved an initial problem in the submitted message, the error message(s) that are included in the REJ do not match the flight plan data that is present in the REJ.<br><br>As of the NM 17 release, the IFPS REJ ORM will contain the flight plan data as is currently displayed in the IFPS flight plan message editor at the time the message is rejected. |
| Impact         | Flight plan message originators will receive a REJ ORM containing a consistent flight plan message and associated IFPS errors.  |

**FB550 (5/5): Auto-correct Date of Flight (DOF/EOBD).**

|                |   |
|----------------|---|
| Users impacted | Aircraft Operators, Flight Plan Message Originators, Computer Flight Plan Service Providers   |
| Objective      | Automatically correct error in IFPS   |
| Description    | Sometimes flight plans are invalid because the date of flight is not indicated using the correct format (YYMMDD) but the format (DDMMYY) is used instead.<br><br>IFPS will detect such cases and automatically correct them.. |
| Impact         | Less invalid flight plan messages and reduced workload for IFPS Staff.  |

**FB550: Reduce manual flight plan processing in IFPS**

| Deployment information      |  |
|-----------------------------|--|
| Service reference           | <a href="#">ID S325 - Flight Plan Processing and Distribution</a>                                |
| Safety assessment           | G4: Changes which are normal changes for a Release.  |
| Operational deployment plan | The FB will be deployed along with the Release.  |
| Documentation publication   | Updated version of IFPS Users manual will be published one month before release migration start. |
| Training sessions           | Provided via the usual IFPS training session.  |
| Users' validation           | An OPT is planned for this FB (cf §4.2).   |

**5.2.14. Airspace Data Domain**

**FB527: CIAM Improvements**

|                |  |
|----------------|--|
| Users impacted | ASM external and internal users.   |
| Objective      | Fine tuning of CIAM to enable more clients to benefit from CIAM functionality. |

|                               |  |
|-------------------------------|--|
| Description                   | In order to allow full use of ASM B2B services, the FB provides a fine tuning of CIAM functionality in the Lead AMC concept and rules surrounding nilAUPs and rolling UUP. |
| Impact                        | Impact mainly on CIAM back-end system.   |
| <b>Deployment information</b> |  |
| Service reference             | <a href="#">ID S334 - Airspace Data Management</a>   |
| Safety assessment             | G3a: These changes are part of the release safety assessment as they are likely to be operationally deployed before the ADR Service is deployed.                           |
| Operational deployment plan   | The FB will be deployed along with the Release.  |
| Documentation publication     | CIAM documentation would be updated.   |
| Training sessions             | No training.   |
| Users' validation             | No validation.   |

|   |  |
|---|--|
| <b>FB528: Airspace Data Domain improvements</b> |  |
| Users impacted                                  | Internal users but with participation of some external clients   |
| Objective                                       | To increase the quality of the Airspace and Restriction data available to front ATFM, FPL systems and external users.  |
| Description                                     | <p>New CACD Validation tools available in particular regarding flight plan validation comparisons per AIRAC cycle:</p> <ul style="list-style-type: none"> <li>• New feature in ENV will avoid dual input in CACD and pre-validation environment.</li> <li>• New FTPS file type on the TEST, OPT and OPS environments: ENV data entered in a Pre-Validation exercise will be written to an FTP file (the data consists of generic ENV state information) which can then be retrieved and applied to the Preparation area of a different database.</li> </ul> <p>Correction of some errors:</p> <ul style="list-style-type: none"> <li>• RAD restriction validity period from present with Flow Routing a route only defined for a period in the future.</li> <li>• ENV Val should give an error for this case, the Restriction Validity period shall start in the future, when the route exists.</li> </ul> |
| Impact  | Impact entirely on CACD back end system.<br>The FB will have no impact on the NOP and no B2B is planned.   |
| <b>Deployment information</b>                   |  |
| Service reference                               | <a href="#">ID S334 - Airspace Data Management</a>   |
| Safety assessment                               | G3a: These changes are part of the release safety assessment as they are likely to be operationally deployed before the ADR Service is deployed.   |
| Operational deployment plan                     | The FB will be deployed along with the Release.  |
| Documentation publication                       | Training documentation will be updated, available on request.  |
| Training sessions                               | No dedicated training session is foreseen.   |
| Users' validation                               | No need for OPT has been identified.   |

5.2.15. Correction and Tuning

| FB154: Reporting C&T for Release 17 |  |
|-------------------------------------|--|
| Users impacted                      | FMPs (CIFLO users)   |
| Objective                           | Enhance Post-Ops analysis on OTMVs, Occupancy Counts and Flow Counts   |
| Description                         | CHMI <del>and NOP</del> will provide access to OTMVs, Occupancy Counts and Flow Counts for Post-Ops analysis on Archived data. The displays will be similar to Tactical. |
| Impact                              | None   |
| <b>Deployment information</b>       |  |
| Service reference                   | <a href="#">ID A121 - Network Operations Monitoring</a>  |
| Safety assessment                   | G1: Changes which are not implemented in the operational systems.  |
| Operational deployment plan         | The FB will be deployed along with the Release.  |
| Documentation publication           | CHMI user guides will be updated.  |
| Training sessions                   | CHMI training will be updated  |
| Users' validation                   | An OPT is planned for this FB (cf §4.2).   |

## 6. ABBREVIATIONS

|        |  |
|--------|--|
| ACC    | Area Control Centre or Area Control                                  |
| AD     | Aerodrome  |
| ADEXP  | ATS Data Exchange Presentation                                       |
| ADR    | Airspace Data Repository   |
| ADS    | <a href="#">Airspace Data Service</a>                                |
| AFTN   | Aeronautical Fixed Telecommunication Network                         |
| AIM    | Air Traffic Flow Management Information Message                      |
| AIP    | Aeronautical Information Publication                                 |
| AIRAC  | Aeronautical Information, Regulation and Control                     |
| AIS    | Aeronautical Information Services                                    |
| AIXM   | Aeronautical Information Exchange Model                              |
| AMC    | Airspace Management Cell   |
| AMON   | Airport Slot Monitoring  |
| ANSP   | Air Navigation Service Provider                                      |
| AO     | Aircraft Operator  |
| AOC    | Airline Operational Control Centre                                   |
| AOLO   | Aircraft Operators Liaison Officer                                   |
| APR    | Aircraft Position Report   |
| ARO    | Air Traffic Services Reporting Office                                |
| ASM    | Airspace Management  |
| ATC    | Air Traffic Control  |
| ATFCM  | Air Traffic Flow and Capacity Management                             |
| ATFM   | Air Traffic Flow Management  |
| ATM    | Air Traffic Management   |
| AUP    | Airspace Use Plan  |
| B2B    | Business-to-Business   |
| BIS    | Business Intelligence System   |
| BOC    | Bottom-Of-Climb  |
| BOD    | Bottom-Of-Descent  |
| BSR    | Business Services Requirement  |
| C&T    | Correction and Tuning  |
| CACD   | Central Airspace and Capacity Database (new name of ENV)             |
| CASTAR | Computer Aided Synchronization Tool for Airspace Repositories        |
| CCAMS  | Centralised SSR Code Allocation & Management                         |
| CDM    | Cooperative Decision Making  |
| CDR    | Conditional Route  |
| CFN    | Commercial Flight Number   |
| CHG    | Modification Message   |
| CHMI   | <a href="#">Collaboration</a> Human Machine Interface                |
| CIAM   | <a href="#">Collaboration</a> Interface for AMCs                     |
| CIFLO  | <a href="#">Collaboration</a> Interface for Flow management position |
| CIR    | <a href="#">Collaboration</a> Interactive Reporting (now NMIR)       |
| CNAA   | Competent National Aviation Authority                                |
| COTS   | Commercial Off-the-Shelf   |
| CPA    | <a href="#">Collaboration</a> Portal Application                     |
| CRCO   | Central Route Charges Office   |
| CSMC   | Call-Sign Management Cell  |
| CSS    | Call-Sign Similarities   |
| CSST   | Call-Sign Similarities Tool  |
| CSSUG  | Call-Sign Similarity User Group                                      |
| CTOT   | Calculated Take-Off Time   |
| CUA    | <a href="#">Common</a> User Access                                   |
| DCT    | Direct Route   |
| DDR    | Demand Data Repository   |
| DEP    | Departure message  |
| DEV    | Development  |
| DMEAN  | Dynamic Management of European Airspace Network                      |
| DNM    | Directorate Network Management                                       |



|             |  |
|-------------|--|
| DOF         | Date of Flight   |
| DWH         | Data Warehouse system                                  |
| EAD         | European AIS Database                                  |
| EASA        | European Aviation Safety Agency                        |
| ECAC        | European Civil Aviation Conference                     |
| EET         | Estimated Elapsed Time                                 |
| EFPL        | Extended Flight Plan                                   |
| ELS         | Elementary Surveillance                                |
| ENV         | NM Environment System (former name of CACD)            |
| EOBD        | Estimated Off Block Date                               |
| eRAD        | Electronic Route Availability Document                 |
| ERNIP       | European Route Network Improvement Plan                |
| ERS         | ENV Reporting System                                   |
| ETFMS       | Enhanced Tactical Flow Management System               |
| ETO         | Estimated Time Over                                    |
| EU          | European Union   |
| EUROCONTROL | European Organization for the Safety of Air Navigation |
| EUUP        | European Update airspace Use Plan                      |
| FAAS        | Flight Assessment and Alert System                     |
| FABEC       | Functional Airspace Block Europe Central               |
| FB          | Functional Block                                       |
| FDC         | Flight Data Contributor                                |
| FDMP        | Flight Data Manager and Publisher                      |
| FDPS        | Flight Data Processing System                          |
| FDU         | Flight Data User                                       |
| FIXM        | Flight Information Exchange Model                      |
| FL          | Flight Level   |
| FMP         | Flow Management Position                               |
| FO          | Flight Object  |
| FOS         | Flight Object Server                                   |
| FPL         | Flight Plan message (ICAO format)                      |
| FPR         | Flight Profile   |
| FRA         | Free Route Airspace                                    |
| FTP         | File Transfer Protocol                                 |
| FTPS        | FTP Server System                                      |
| GAT         | General Air Traffic                                    |
| HDLA        | Handling Agent   |
| HMI         | Human-Machine Interface                                |
| IATA        | International Air Transport Association                |
| ICAO        | International Civil Aviation Organization              |
| ID          | Identifier   |
| IFPS        | Integrated Initial Flight Plan Processing System       |
| IFPUV       | IFPS Unit for Validation                               |
| IFR         | Instrument Flight Rules                                |
| IOP         | InterOPERability                                       |
| IR          | Implementing Rule                                      |
| LARA        | Local And Regional Airspace management system          |
| MIL         | Military   |
| MILO        | Military Liaison Officer                               |
| MUAC        | Maastricht Upper Area Control Centre                   |
| NM          | Network Manager  |
| NMC         | Network Management Cell                                |
| NMIR        | NM Interactive Reporting (former CIR)                  |
| NMOC        | Network Manager Operations Centre                      |
| NMVP        | Network Manager Validation Platform                    |
| NOP         | Network Operations Plan                                |
| NTS         | Network Technical Systems (DNM)                        |
| OAG         | Official Airlines Guide                                |
| OAT         | Operational Air Traffic                                |
| OPS         | Operations   |
| OPT         | Operational testing                                    |

|                       |  |
|-----------------------|--|
| ORCAM                 | Originating Region Code Assignment Method              |
| ORM                   | Operational Reply Message                              |
| OSED                  | Operational Service and Environment Description        |
| OTMV                  | Occupancy Traffic Monitor Values                       |
| PC                    | Personal Computer                                      |
| PC                    | Provisional Council                                    |
| PT                    | Point : ENV data entity type                           |
| R&D                   | Research and Development                               |
| RAD                   | Route Availability Document                            |
| REJ                   | Reject Message   |
| RMK                   | Remark   |
| RPL                   | Repetitive Flight Plan                                 |
| RRP                   | Rerouting Proposal Message                             |
| RSA                   | Restricted Airspace                                    |
| RVR                   | Runway Visual Range                                    |
| SAFA                  | Safety Assessment of Foreign Aircraft (Programme)      |
| SAT                   | System Acceptance Test                                 |
| <a href="#">SAT/I</a> | <a href="#">Inter-System System Acceptance Testing</a> |
| SDO                   | Static Data Operation                                  |
| SESAR                 | Single European Sky ATM Research                       |
| SIMEX                 | SIMulation and EXperiment (NM tool)                    |
| SIT                   | System Integration Team                                |
| SJU                   | SESAR Joint Undertaking                                |
| SRD                   | Software Requirements Document                         |
| SSR                   | Secondary Surveillance Radar                           |
| STAM                  | Short-Term ATFM Measures                               |
| TB                    | Technical Block  |
| TBD                   | To Be Defined, Determined or Discussed                 |
| TOC                   | Top-Of-Climb   |
| TOD                   | Top-Of-Descend   |
| TOW                   | Take-Off Weight  |
| TSA                   | Temporary Segregated Area                              |
| TSR                   | Technical Services Requirement                         |
| TTA                   | Target Time of Arrival                                 |
| TTO                   | Target Time-Over                                       |
| UID                   | Unique Identifier                                      |
| URL                   | Uniform Resource Locator                               |
| UTC                   | Coordinated Universal Time                             |
| UUP                   | Updated Airspace Use Plan                              |
| VP                    | Validation Plan  |