

# EUROPEAN (EUR) AIR NAVIGATION PLAN

## VOLUME III

**ENDORSED BY EASPG/1**

2 December 2019

**Key to mark-up:**

**Green highlight** = content to be reviewed and updated by relevant experts

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## **EUR ANP, VOLUME III**

### **PART 0 – INTRODUCTION**

#### **1. INTRODUCTION**

1.1 The background to the publication of ANPs in three volumes is explained in the Introduction in Volume I. The procedure for amendment of Volume III is also described in Volume I. Volume III contains dynamic/flexible plan elements related to the implementation of the air navigation system and its modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the Global Air Navigation Plan (GANP).

1.2 The information contained in Volume III is related mainly to:

- Planning: objectives set, priorities and targets planned at regional or sub-regional levels;
- Implementation monitoring and reporting: monitoring of the progress of implementation towards targets planned. This information should be used as the basis for reporting purposes (i.e.: global and regional air navigation reports and performance dashboards); and/or
- Guidance: providing regional guidance material for the implementation of specific system/procedures in a harmonized manner.

1.3 The management of Volume III is the responsibility of the European Air Navigation Planning Group (EANPG).

1.4 Volume III should be used as a tool for monitoring and reporting the status of implementation of the elements planned here above, through the use of tables/databases and/or references to online monitoring tools, as endorsed by EANPG. The status of implementation is updated on a regular basis as endorsed by the EANPG.

#### **2. AVIATION SYSTEM BLOCK UPGRADES (ASBUs), MODULES AND ROADMAPS**

2.1 The ASBU Modules and Roadmaps form a key component to the GANP, noting that they will continue to evolve as more work is done on refining and updating their content and in subsequent development of related provisions, support material and training.

2.2 Although the GANP has a worldwide perspective, it is not intended that all Block Upgrade Modules are required to be applied in every State, sub-region and/or region. Many of the Block Upgrade Modules contained in the GANP are specialized packages that should be applied only where the specific operational requirement exists or corresponding benefits can be realistically projected. Accordingly, the Block Upgrade methodology establishes an important flexibility in the implementation of its various Modules depending on a region, sub-region and/or State's specific operational requirements. Guided by the GANP, ICAO EUR regional, sub-regional and State planning should identify Modules which best provide the needed operational improvements.

## **EUR ANP, VOLUME III**

### **PART I - GENERAL PLANNING ASPECTS (GEN)**

#### **1. PLANNING METHODOLOGY**

1.1 Guided by the GANP, the regional planning process starts by identifying the homogeneous ATM areas, major traffic flows and international aerodromes. An analysis of this data leads to the identification of opportunities for performance improvement. Modules from the Aviation System Block Upgrades (ASBUs) are evaluated to identify which of those modules best provide the needed operational improvements. Depending on the complexity of the module, additional planning steps may need to be undertaken including financing and training needs. Finally, regional plans would be developed for the deployment of modules by drawing on supporting technology requirements. This is an iterative planning process which may require repeating several steps until a final plan with specific regional targets is in place. This planning methodology requires full involvement of States, service providers, airspace users and other stakeholders, thus ensuring commitment by all for implementation.

1.2 Block 0 features Modules characterized by technologies and capabilities which have already been developed and implemented in many parts of the world today. It therefore features a near-term availability milestone, or Initial Operating Capability (IOC), of 2013 for high density based on regional, sub-regional and State operational need. Blocks 1 through 3 are characterized by both existing and projected performance area solutions, with availability milestones beginning in 2018, 2023 and 2028 respectively.

#### **2. REVIEW AND EVALUATION OF AIR NAVIGATION PLANNING**

2.1 The progress and effectiveness against the priorities set out in the regional air navigation plans should be annually reported, using a consistent reporting format, to ICAO.

2.2 Performance monitoring requires a measurement strategy. Data collection, processing, storage and reporting activities supporting the identified global/regional performance metrics are fundamental to the success of performance-based approaches.

2.3 The air navigation planning and implementation performance framework prescribes reporting, monitoring, analysis and review activities being conducted on a cyclical, annual basis. An Air Navigation Reporting Form (ANRF) reflecting selected key performance areas as defined in the Manual on Global Performance of the Air Navigation System (ICAO Doc 9883) has been developed for each ASBU Module. The ANRF is a customized tool which is recommended for the application of setting planning targets, monitoring implementation, and identifying challenges, measuring implementation/performance and reporting. If necessary, other reporting formats that provide more details may be used but should contain as a minimum the elements described in the ANRF template. A sample of the ANRF is provided in **Appendix A**. A sample Template of a planning table which may be used to show the elements planned in an ICAO region is provided in **Appendix B**.

#### **3. REPORTING AND MONITORING RESULTS**

3.1 Reporting and monitoring results will be analyzed by the PIRGs, States and ICAO Secretariat to steer the air navigation improvements, take corrective actions and review the allocated objectives, priorities and targets if needed. The results will also be used by ICAO and aviation partner stakeholders to develop the annual Global Air Navigation Report. The report results will provide an opportunity for the international civil aviation community to compare progress across different ICAO regions in the establishment of air navigation infrastructure and performance-based procedures.

3.2 The reports will also provide the ICAO Council with detailed annual results on the basis of which tactical adjustments will be made to the performance framework work programme, as well as triennial policy adjustments to the GANP and the Block Upgrade Modules.

3.3           **Table GEN III-1** contains a minimum set of Implementation Indicator(s) for each of the eighteen ASBU Block 0 Modules necessary for the monitoring of these Modules (if identified as a priority for implementation at regional or sub-regional level). These indicators are intended to enable comparison between ICAO Regions with respect to ASBU Block 0 Modules and will apply only to commonly selected ASBU Modules. All regions/PIRGs reserve the right to select the ASBU Modules relevant to their needs and to endorse additional indicators, as deemed necessary. No reporting is required for ASBU Block 0 Modules that have not been selected.

*Note: The priority for implementation as well as the applicability area of each selected ASBU Block 0 Module is to be defined by the EANPG. This should be reflected in Part II – Air Navigation System Implementation.*

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**TABLE GEN III-1 – IMPLEMENTATION INDICATOR(S) FOR EACH ASBU BLOCK 0  
MODULE**

**Explanation of the Table**

- 1 Block 0 Module Code  
 2 Block 0 Module Title  
 3 High level Implementation Indicator  
 4 Remarks

Module Code	Module Title	Implementation Indicator	Remarks
1	2	3	4
B0-APTA	Optimization of Approach Procedures including vertical guidance	% of international aerodromes having at least one runway end provided with APV Baro-VNAV or LPV procedures	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	% of applicable international aerodromes having implemented increased runway throughput through optimized wake turbulence separation	1. Not to be considered for the first reporting cycles due to lack of maturity. 2. List of ADs to be established through regional air navigation agreement.
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	% of applicable international aerodromes having implemented AMAN / DMAN	1. Not to be considered for the first reporting cycles due to lack of maturity. 2. List of ADs to be established through regional air navigation agreement.
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	% of applicable international aerodromes having implemented A-SMGCS Level 2	List of ADs to be established through regional air navigation agreement.
B0-ACDM	Improved Airport Operations through Airport-CDM	% of applicable international aerodromes having implemented improved airport operations through airport-CDM	List of ADs to be established through regional air navigation agreement.
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	% of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC / OLDI with neighbouring ACCs	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	- % of States having implemented an AIXM based AIS database - % of States having implemented QMS	

Module Code	Module Title	Implementation Indicator	Remarks
1	2	3	4
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	<ul style="list-style-type: none"> <li>- % of States having implemented SADIS FTP</li> <li>- % of States hosting a VAAC having implemented VAA/VAG</li> <li>- % of States hosting a VO having implemented VONA</li> <li>- % of States having implemented QMS</li> </ul>	<ul style="list-style-type: none"> <li>- 91% as of 25 Sep 2017</li> <li>- 100% as of 23 Sep 2016</li> <li>- 100% as of 23 Sep 2016</li> <li>- 98% as of 25 Sep 2017</li> </ul> <i>Note: Information received through the METG mechanism.</i>
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	% of FIRs in which FUA is implemented	
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	% of FIRs within which all ACCs utilize ATFM systems	
B0-ASUR	Initial capability for ground surveillance	% of FIRs where ADS-B OUT and/or MLAT are implemented for the provision of surveillance services in identified areas.	
B0-ASEP	Air Traffic Situational Awareness (ATSA)	% of States having implemented air traffic situational awareness	1. Not to be considered for the first reporting cycles due to lack of maturity.
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	% of FIRs having implemented in-trail procedures	1. Not to be considered for the first reporting cycles due to lack of maturity.
B0-ACAS	ACAS Improvements	% of States requiring carriage of ACAS (with TCAS 7.1 evolution)	
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	% of States having implemented ground-based safety-nets (STCA, APW, MSAW, etc.)	
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	<ul style="list-style-type: none"> <li>- % of international aerodromes / TMAs with PBN STAR implemented</li> <li>- % of international aerodromes/TMA where CDO is implemented</li> </ul>	
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	% of FIRs utilising data link en-route in applicable airspace	
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	<ul style="list-style-type: none"> <li>- % of international aerodromes / TMAs with PBN SID implemented</li> <li>- % of international aerodromes/TMA where CCO is implemented</li> </ul>	The implementation of CCOs and CDOs are top priorities from the GANP and should be addressed jointly

## Appendix A

### SAMPLE TEMPLATE

#### 1. AIR NAVIGATION REPORT FORM (ANRF)

(This template demonstrates how ANRF to be used.

The data inserted here refers to ASBU B0-05/CDO as an example only)

#### Regional and National planning for ASBU Modules

<b>2. REGIONAL/NATIONAL PERFORMANCE OBJECTIVE – B0-05/CDO:</b> <b>Improved Flexibility and Efficiency in Descent Profiles</b>					
<b>Performance Improvement Area 4:</b> <b>Efficient Flight Path – Through Trajectory-based Operations</b>					
<b>3. ASBU B0-05/CDO: Impact on Main Key Performance Areas (KPIs)</b>					
	<b>Access &amp; Equity</b>	<b>Capacity</b>	<b>Efficiency</b>	<b>Environment</b>	<b>Safety</b>
<b>Applicable</b>	N	N	Y	Y	Y
<b>4. ASBU B0-05/CDO: Planning Targets and Implementation Progress</b>					
<b>5. Elements</b>			<b>6. Targets and implementation progress (Ground and Air)</b>		
1. CDO					
2. PBN STARs					
<b>7. ASBU B0-05/CDO: Implementation Challenges</b>					
<b>Elements</b>	<b>Implementation Area</b>				
	<b>Ground system Implementation</b>	<b>Avionics Implementation</b>	<b>Procedures Availability</b>	<b>Operational Approvals</b>	
1. CDO					
2. PBN STARs					



<b>8. Performance Monitoring and Measurement</b> <b>8A. ASBU B0-05/CDO: Implementation Monitoring</b>	
Elements	Performance Indicators/Supporting Metrics
1. CDO	Indicator: Percentage of international aerodromes/TMAs with CDO implemented Supporting metric: Number of international aerodromes/TMAs with CDO implemented
2. PBN STARs	Indicator: Percentage of international aerodromes/TMAs with PBN STARs implemented Supporting metric: Number of international aerodromes/TMAs with PBN STARs implemented

<b>8. Performance Monitoring and Measurement</b> <b>8 B. ASBU B0-05/CDO: Performance Monitoring</b>	
Key Performance Areas (Out of eleven KPAs, for the present until experienced gained, only five have been selected for reporting through ANRF)	Where applicable, indicate qualitative Benefits,
Access & Equity	Not applicable
Capacity	Not applicable
Efficiency	Cost savings through reduced fuel burn. Reduction in the number of required radio transmissions.
Environment	Reduced emissions as a result of reduced fuel burn
Safety	Consistent flight paths and stabilized approach paths. Reduction in the incidence of controlled flight into terrain (CFIT).
<b>9. Identification of performance metrics:</b> It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving as an example to measure the module(s)' implementation benefits, without trying to apportion these benefits between module, have been identified for the family of ASBU modules selected for air navigation implementation, States/Region to choose the applicable performance (benefit) metrics from the list available on page 5. This approach would facilitate States in collecting data for the chosen performance metrics. States/Region, however, could add new metrics for different KPAs based on maturity of the system and ability to collect relevant data.	

## AIR NAVIGATION REPORT FORM HOW TO USE - EXPLANATORY NOTES

1. **Air Navigation Report Form (ANRF):** This form is nothing but the revised version of Performance Framework Form that was being used by Planning and Implementation Regional Groups (PIRGs)/States until now. The ANRF is a customized tool for Aviation System Block Upgrades (ASBU) Modules which is recommended for application for setting planning targets, monitoring implementation, identifying challenges, measuring implementation/performance and reporting. Also, the PIRGs and States could use this report format for any other air navigation improvement programmes such as Search and Rescue. If necessary, other reporting formats that provide more details may be used but should contain as a minimum the elements described in this ANRF template. The results will be analysed by ICAO and aviation partners and utilized in the Regional Performance Dashboards and the Annual Air Navigation Report. The conclusions from the Air Navigation Report will serve as the basis for future policy adjustments, aiding safety practicality, affordability and global harmonization, amongst other concerns.
2. **Regional/National Performance objective:** In the ASBU methodology, the performance objective will be the title of the ASBU module itself. Furthermore, indicate alongside corresponding Performance Improvement area (PIA).
3. **Impact on Main Key Performance Areas:** Key to the achievement of a globally interoperable ATM system is a clear statement of the expectations/benefits to the ATM community. The expectations/benefits are referred to eleven Key Performance Areas (KPA) and are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. The KPAs applicable to respective ASBU module are to be identified by marking Y (Yes) or N (No). The impact assessment could be extended to more than five KPAs mentioned above if maturity of the national system allows and the process is available within the State to collect the data.
4. **Planning Targets and Implementation Progress:** This section indicates planning targets and status of progress in the implementation of different elements of the ASBU Module for both air and ground segments.
5. **Elements related to ASBU module:** Under this section list elements that are needed to implement the respective ASBU Module. Furthermore, should there be elements that are not reflected in the ASBU Module (example: In ASBU B0-80/ACDM, Aerodrome certification and data link applications D-VOLMET, D-ATIS, D-FIS are not included; Similarly in ASBU B0-30/DAIM, note that WGS-84 and eTOD are not included) but at the same time if they are closely linked to the module, ANRF should specify those elements. As a part of guidance to PIRGs/States, every Regional ANP will have the complete list of all 18 Modules of ASBU Block 0 along with corresponding elements, equipage required on the ground and in the air as well as metrics specific to both implementation and performance (benefits).
6. **Targets and implementation progress (Ground and Air):** Planned implementation date (month/year) and the current status/responsibility for each element are to be reported in this section. Please provide as much details as possible and should cover both avionics and ground systems. This ANRF being high level document, develop necessary detailed action plan separately for each element/equipage.

7. **Implementation challenges:** Any challenges/problems that are foreseen for the implementation of elements of the Module are to be reported in this section. The purpose of the section is to identify in advance any issues that will delay the implementation and if so, corrective action is to be initiated by the concerned person/entity. The four areas, under which implementation issues, if any, for the ASBU Module to be identified, are as follows:

- Ground System Implementation:
- Avionics Implementation:
- Procedures Availability:
- Operational Approvals:

Should be there no challenges to be resolved for the implementation of ASBU Module, indicate as “NIL”.

8. **Performance Monitoring and Measurement:** Performance monitoring and measurement is done through the collection of data for the supporting metrics. In other words, metrics are quantitative measure of system performance – how well the system is functioning. The metrics fulfil three functions. They form a basis for assessing and monitoring the provision of ATM services, they define what ATM services user value and they can provide common criteria for cost benefit analysis for air navigation systems development. The Metrics are of two types:

- A. **Implementation Monitoring:** Under this section, the indicator supported by the data collected for the metric reflects the status of implementation of elements of the Module. For example- Percentage of international aerodromes with CDO implemented. This indicator requires data for the metric “number of international aerodromes with CDO”.
- B. **Performance Monitoring:** The metric in this section allows to assess benefits accrued as a result of implementation of the module. The benefits or expectations, also known as Key Performance Areas (KPA), are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present until experienced gained, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. Where applicable, mention qualitative benefits under this section.

9. **Identification of performance metrics:** It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving as an example to measure the module(s)’ implementation benefits, without trying to apportion these benefits between module, have been identified on page 6. For the family of ASBU modules selected for air navigation implementation, States/Region to choose the applicable performance (benefit) metrics from the list available on page 6. This approach would facilitate States in collecting data for the chosen performance metrics. States/Region, however, could add new metrics for different KPAs based on maturity of the system and ability to collect relevant data.
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## EUR ANP, VOLUME III

### PART II – AIR NAVIGATION SYSTEM/ASBU IMPLEMENTATION

#### 1. INTRODUCTION

1.1 The GANP and the ASBU concept and documents were developed to provide the framework and strategic direction for a global and harmonized aviation system. They provide strategic direction and define measurable operational improvements and include key civil aviation policy principles to assist ICAO Regions and States with the preparation and implementation of their air navigation plans.

1.2 The planning and implementation of required elements of selected ASBU Modules in the ICAO EUR Region should be undertaken within the framework of the EANPG with the participation and support of all stakeholders, including regulatory personnel so as to ensure global interoperability and harmonization of the aviation system.

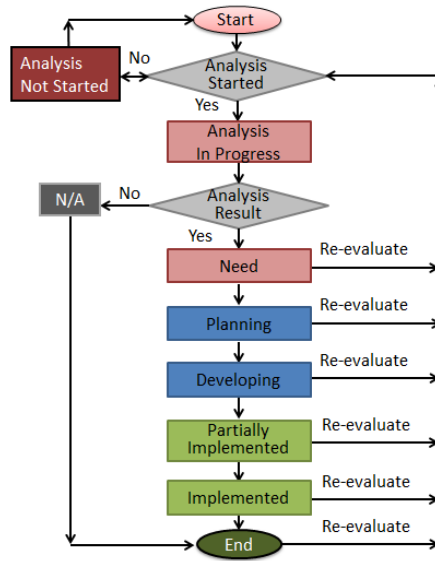
1.3 The ASBU implementation monitoring report will be presented to the EANPG on an annual basis and can be, after EANPG endorsement, issued as a companion document to Volume III.

1.4 **Figure GEN III-1** depicts the workflow for analysing and implementing ASBU Module elements. This same method can be applied with respect to Regional Aviation System Improvements or national aviation system improvements.

1.5 The significance of each step in the workflow as it pertains to regional planning is as follows:

- **Analysis Not Started** – The requirement to implement this ASBU Module element has not yet been assessed by any State in the Region
- **Analysis In Progress** – A Need Analysis as to whether or not this ASBU Module element is required is in progress by at least one State in the Region
- **N/A** – The Region has decided not to implement this ASBU Module element
- **Need** - One or more States in the Region have determined the ASBU Module element is required, but none have begun planning for the implementation
- **Planning** – Implementation of this ASBU Module element is planned, but not started
- **Developing** – Implementation of this ASBU Module element is in the development phase, but not yet operational
- **Partially Implemented** – Implementation of this ASBU Module element is partially completed and/or operational in at least one area of the Region
- **Implemented** - Implementation of this ASBU Module element has been completed and/or is fully operational in all areas of the Region where the need was identified

1.6 The analysis and implementation status determined in accordance with the above is reflected in the applicable ANRFs and in the ASBU Implementation Status Tables (Tables ASBU III-EUR-1 and 2).

**FIGURE GEN III-1 – ANALYSIS AND IMPLEMENTATION WORKFLOW**

## 2. MONITORING OF ASBU MODULES IMPLEMENTATION

2.1 The monitoring of the regional implementation progress should be done by the EANPG for all planned elements. Due to the level of effort required, development of, and monitoring of, performance metrics/indicators should only be done for highest priority implementations.

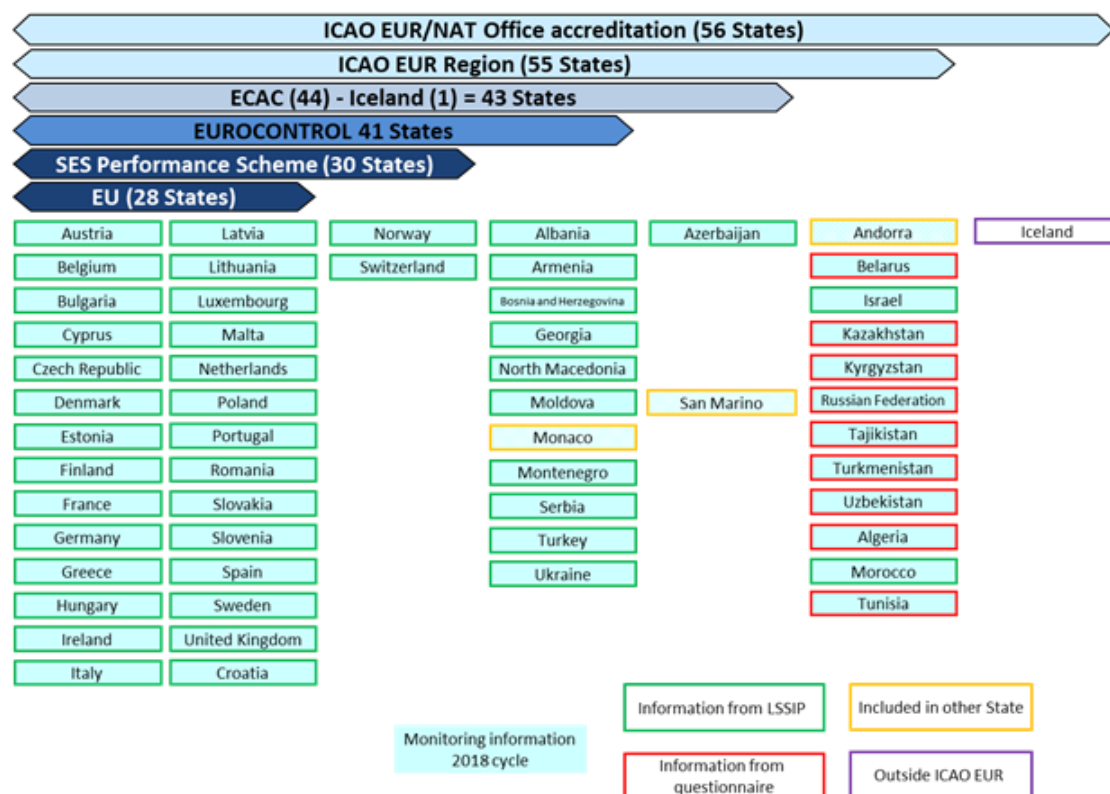
2.2 The EANPG has determined the mechanisms and tools for the monitoring and collection of necessary data at regional levels.

## 3. ASBU MODULES MONITORING MECHANISM IN THE EUR REGION

3.1 At EANPG/55 (25-28 November 2013), it was agreed that, in order to enable monitoring and reporting of the current priorities, a cooperative mechanism would be put in place between ICAO and EUROCONTROL. This mechanism would encompass the utilisation of the EUROCONTROL LSSIP process complemented by a specific ICAO EUR ASBU questionnaire. The EANPG/58 (28 November – 1 December 2016) also recommended that the progress/status of implementation of ASBU Block 0 modules be reported, for monitoring purposes, by States regardless of their assigned priority in the EANPG/55 Conclusions. Full details of the EUROCONTROL LSSIP process can be found in the 2018 ASBU Implementation Monitoring Report.

3.5 The 2018 ASBU Implementation Monitoring Report addresses the deployment status, with reference date December 2018, for the defined ASBU Block 0 Modules as approved by EANPG/55 and revised by EANPG/58. This report is based, on one hand, on the information submitted by the 43 States which are participating in the LSSIP mechanism and on the other hand from the data which is reported in the ASBU implementation monitoring questionnaires for the 9 States within the ICAO EUR Region that are outside the LSSIP reporting mechanism. It must be highlighted that this report includes again the updated progress/status of implementation of ASBU Block 0 modules (reference period 2018) for 55 out of 55 States that are accredited to the ICAO EUR Region. It must also be noted that Monaco, San Marino and Andorra are not addressed separately in this report, neither in related statistics, because for monitoring purposes they are included in other hosting States. Therefore there are 52 Member States considered individually in the statistics of the following chapters.

**FIGURE ANS-ASBU III-EUR-1 – 2018 ASBU MONITORING REPORTING OF ICAO EUR STATES**



3.7 Additional information on implementation for B0-AMET can be found in Table ASBU-EUR-B0-AMET and for B1-AMET, in Table ASBU-EUR-B1-AMET.

3.8 Additional information on implementation for B0-DATM can be found in Tables ASBU-EUR-B0-DATM 3-1, 3-2, 3-3, 3-4.

**TABLE ASBU-III-EUR-1 – EUR REGION IMPLEMENTATION STATUS OF BLOCK 0 MODULE  
ELEMENTS**

<p>Refer to Companion Document <i>ASBU Implementation Monitoring Report, ICAO EUR States</i></p>
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**TABLE ASBU- EUR-B0 – AMET: METEOROLOGICAL INFORMATION SUPPORTING ENHANCED OPERATIONAL EFFICIENCY AND SAFETY****Description and purpose**

Global, regional and local meteorological information:

- a) forecasts provided by world area forecast centres (WAFC), volcanic ash advisory centres (VAAC) and tropical cyclone advisory centres (TCAC);
- b) aerodrome warnings to give concise information of meteorological conditions that could adversely affect all aircraft at an aerodrome including wind shear; and
- c) SIGMETs to provide information on occurrence or expected occurrence of specific en-route weather phenomena which may affect the safety of aircraft operations and other operational meteorological (OPMET) information, including METAR/SPECI and TAF, to provide routine and special observations and forecasts of meteorological conditions occurring or expected to occur at the aerodrome.

This module includes elements which should be viewed as a subset of all available meteorological information that can be used to support enhanced operational efficiency and safety.

**Main performance impact:**

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	Y	Y

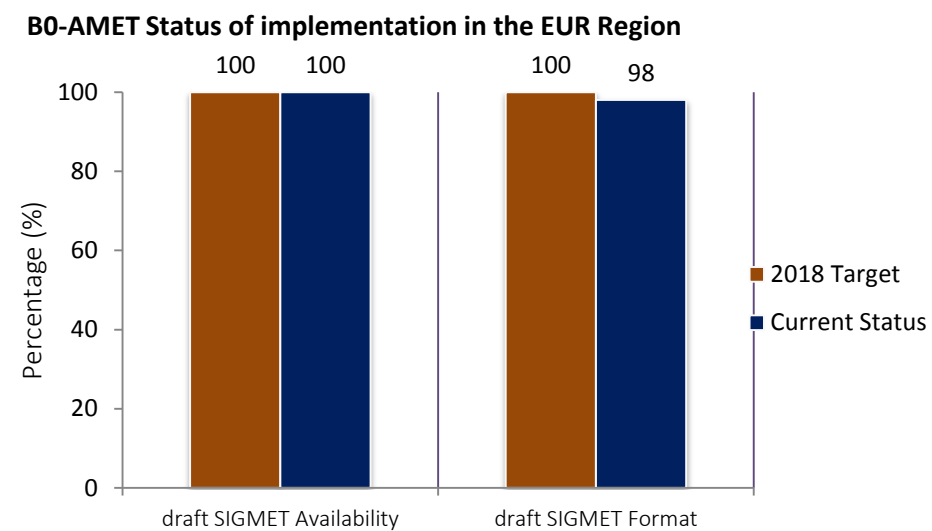
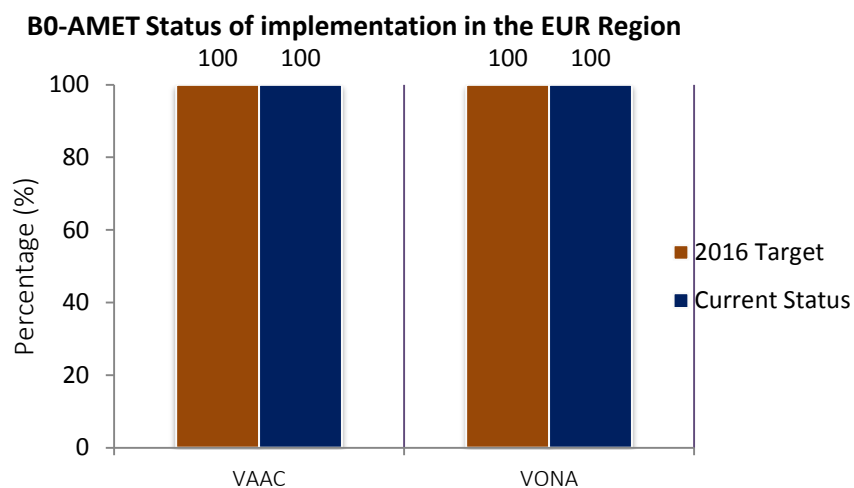
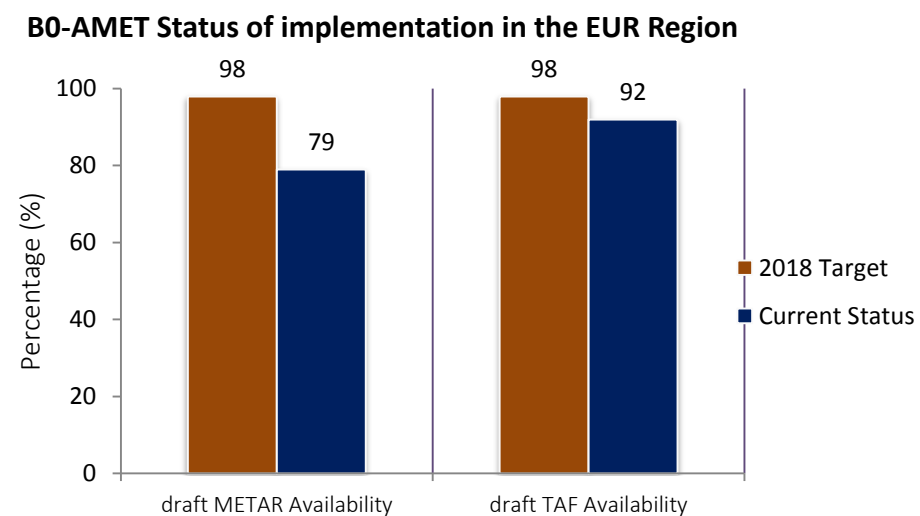
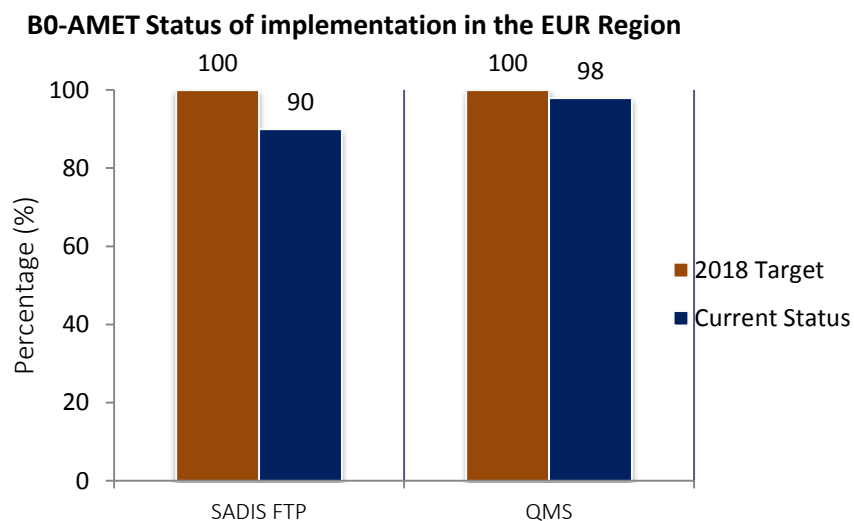
**Applicability consideration:**

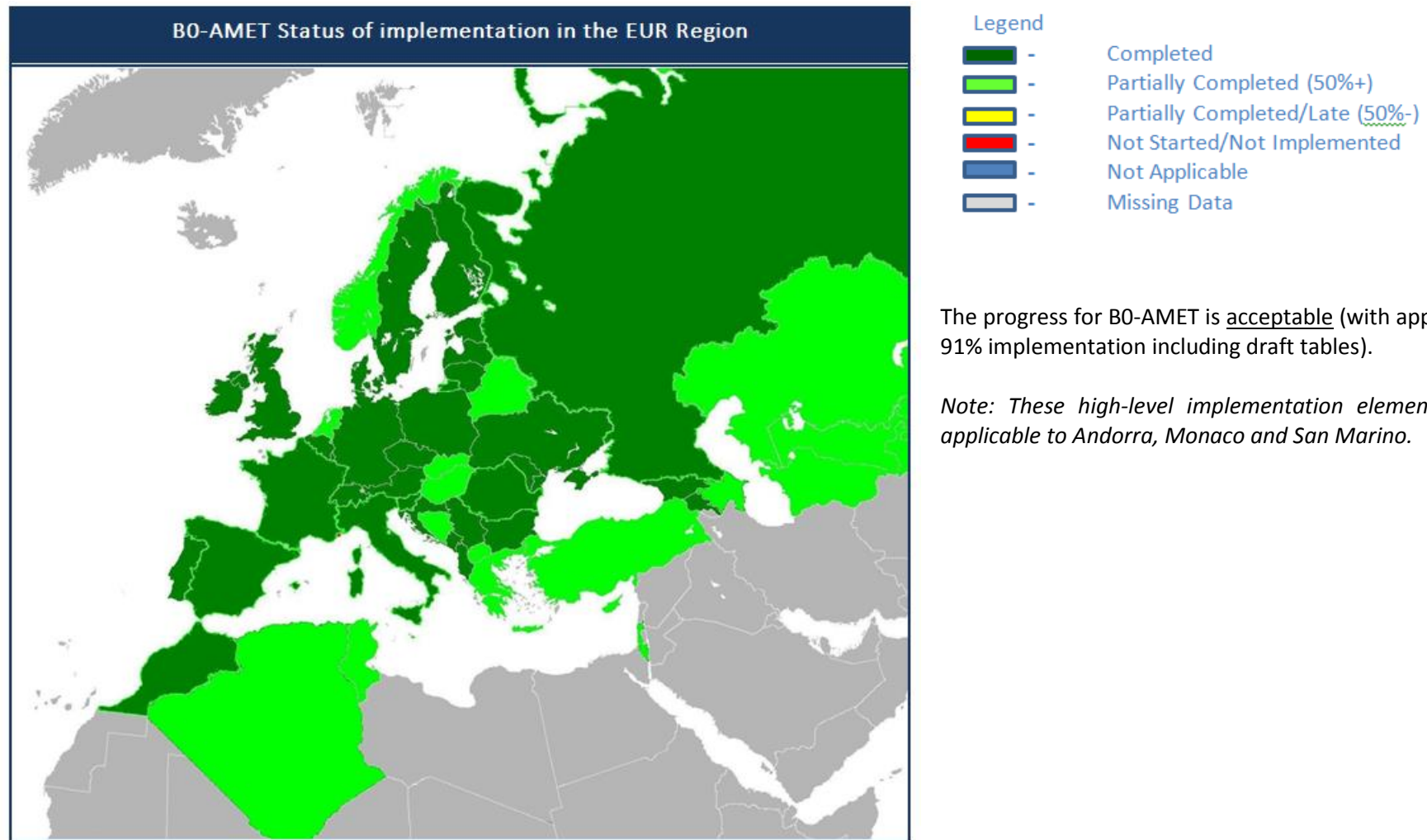
Applicable to traffic flow planning, and to all aircraft operations in all domains and flight phases, regardless of level of aircraft equipage.

<i>Elements</i>	<i>Applicability</i>	<i>Performance Indicators/Supporting Metrics</i>	<i>Targets</i>
SADIS FTP	<i>All States</i>	Indicator: % of States having implemented SADIS FTP Supporting metric: number of States having implemented SADIS FTP	100% by Dec. 2019
QMS	<i>All States</i>	Indicator: % of States having implemented QMS for MET Supporting metric: number of States having implemented QMS for MET	100% by Dec. 2019
METAR Availability	<i>All States</i>	Indicator: % of States providing METAR as per requirements in the ANP, Volume II Table MET II-2 Supporting metric: number of States providing METAR as per requirements in the ANP Volume II Table MET II-2	98% by Dec 2019

<i>Elements</i>	<i>Applicability</i>	<i>Performance Indicators/Supporting Metrics</i>	<i>Targets</i>
TAF Availability	<i>All States</i>	Indicator: % of States providing TAF as per requirements in the ANP, Volume II Table MET II-2 Supporting metric: number of States providing TAF as per requirements in the ANP Volume II Table MET II-2	98% by Dec 2019
METAR Timeliness	<i>All States</i>	Indicator: % of States providing METAR in the time required as defined in Annex 3 Supporting metric: number of States providing METAR in the time required as defined in Annex 3	98% by Dec 2019
TAF Timeliness	<i>All States</i>	Indicator: % of States providing TAF in the time required as defined in Annex 3 Supporting metric: number of States providing TAF in the time required as defined in Annex 3	98% by Dec 2019
SIGMET Availability	<i>All with a FIR</i>	Indicator: % of States providing SIGMET Supporting metric: number of States providing SIGMET	100% by Dec 2019
SIGMET Format	<i>All with a FIR</i>	Indicator: % of States providing SIGMET format in accordance with WMO AHL in EUR Doc 014 Supporting metric: number of States providing SIGMET format in accordance with WMO AHL in EUR Doc 014	100% by Dec 2019
VAAC	<i>France, United Kingdom</i>	Indicator: % of VAACs in or serving the EUR Region that provide Annex 3 volcanic ash products (Volcanic Ash Advisories (VAA) and Volcanic Ash Advisories in Graphic Form (VAG)) Supporting metric: number of States hosting a VAAC having implemented VAA/VAG	100% by Dec 2016
VONA	<i>Italy, Russian Federation, Spain</i>	Indicator: % of Volcano Observatories in the EUR Region that provide volcano observatory notice for aviation (VONA) as per the Handbook on the International Airways Watch (IAVW) (Doc 9766) Supporting metric: number of States with Volcano Observatory having implemented VONA	100% by Dec 2016

### B0-AMET Status of implementation in the EUR Region





Module	Elements	Albania	Algeria	Armenia	Austria	Azerbaijan	Belarus	Belgium	Bosnia and Herzegovina	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland
B0-AMET	SADIS FTP															
	QMS															
	Draft METAR availability															
	Draft TAF availability															
	Draft METAR timeliness															
	Draft TAF timeliness															
	Draft SIGMET availability															
	Draft SIGMET format															
	VAAC															
	VONA															
Module	Elements	France	Georgia	Germany	Greece	Hungary	Ireland	Israel	Italy	Kazakhstan	Kyrgyzstan	Latvia	Lithuania	Luxembourg	Malta	Monaco
B0-AMET	SADIS FTP															
	QMS															
	Draft METAR availability															
	Draft TAF availability															
	Draft METAR timeliness															
	Draft TAF timeliness															
	Draft SIGMET availability															
	Draft SIGMET format															
	VAAC															
	VONA															

Module	Elements	Montenegro	Morocco	Netherlands	North Macedonia	Norway	Poland	Portugal	Republic of Moldova	Romania	Russian Federation	Serbia	Slovakia	Slovenia	Spain	Sweden
B0-AMET	SADIS FTP															
	QMS															
	Draft METAR availability															
	Draft TAF availability															
	Draft METAR timeliness															
	Draft TAF timeliness															
	Draft SIGMET availability															
	Draft SIGMET format															
	VAAC															
	VONA															

Module	Elements	Switzerland	Tajikistan	Tunisia	Turkey	Turkmenistan	Ukraine	United Kingdom	Uzbekistan
B0-AMET	SADIS FTP								
	QMS								
	Draft METAR availability								
	Draft TAF availability								
	Draft METAR timeliness								
	Draft TAF timeliness								
	Draft SIGMET availability								
	Draft SIGMET format								
	VAAC								
	VONA								

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**B0-DATM: Service Improvement through Digital Aeronautical Information Management**


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**TABLE ASBU-EUR-B0-DATM 3-1****Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)****EXPLANATION OF THE TABLE**

Column:

- 1 Name of the State or territory for which the provision of AIS/AIM products and services based on the IAID is required.
- 2 Requirement for the implementation and designation of the authoritative IAID, shown by:
  - FI – Fully Implemented
  - PI – Partially Implemented
  - NI – Not Implemented

*Note 1 — The IAID of a State is a single access point for one or more databases (AIS, Terrain, Obstacles, AMDB, etc.).*  
*Note 2 — Information providing detail of “PI” should be given in the Remarks column (the implemented components of the IAID).*  
*Note 3 — The information related to the designation of the authoritative IAID should be published in the AIP (GEN 3.1)*
- 3 Requirement for an IAID driven eAIP production, shown by:
  - FI – Fully Implemented (eAIP: Text, Tables and Charts)
  - NI – Not Implemented

*Note 4 — AIP production includes, production of AIP, AIP Amendments and AIP Supplements*
- 4 Requirement for an IAID driven NOTAM production, shown by:
  - FC – Fully Compliant
  - NC – Not compliant
- 5 Requirement for an IAID driven SNOWTAM production, shown by:
  - FC – Fully Compliant
  - NC – Not compliant
- 6 Requirement for an IAID driven PIB production, shown by:
  - FC – Fully compliant
  - NC – Not compliant
- 7 Requirement for Charting systems to be interoperable with the IAID, shown by:
  - FC – Fully compliant

PC – Partially compliant

NC – Not compliant

8 Requirement for Procedure design systems to be interoperable with the IAID, shown by:

FI – Fully Implemented

PI – Partially Implemented

NI – Not Implemented

*Note 5 — full implementation includes the use of the IAID for the design of the procedures and for the storage of the encoded procedures in the IAID*

9 Requirement for ATS systems to be interoperable with the IAID, shown by:

FI – Fully Implemented

PI – Partially Implemented

NI – Not Implemented

10 Action Plan — short description of the State's Action Plan with regard to the provision of AIM products and services based on the IAID, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

11 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

State	IAID	eAIP	NOTAM	SNOWTAM	PIB	Charting	Procedure Design	ATS	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
ALBANIA	PI	FI	FC	NC	FC	PC	NI	NI		AIXM 5.1 in progress
ALGERIA										
ARMENIA	FI	FI	FC	FC	FC	PC	NI	PI	7,8,9: 2018	AIXM FC (EAD)
AUSTRIA	FI	PI	FC	FC	FC	PC	PI	NI	2021	
AZERBAIJAN	FI	FI	FC	FC	FC	FC	PI	FI		AIXM 5.1 FC
BELARUS	FI	FI	FC	FC	FC	PC	PI	NI	2,7,8: 2017	AIXM PC
BELGIUM	FI	NI	FC	FC	FC	FC	PI	NI	3: end 2017	
BOSNIA AND HERZEGOVINA										
BULGARIA	PI	NI	NC	NC	NC	NC	NC		AIM system 2018	AIXM 4.5 (EAD) not linked to other modules
CROATIA										
CYPRUS	FI	FI	FC	NC	FC	FC	FI			EAD
CZECH REPUBLIC	PI	NI	FC	FC	FC	PC	FI	PI	2020	New IAID for static data in progress



State	IAID	eAIP	NOTAM	SNOWTAM	PIB	Charting	Procedure Design	ATS	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
DENMARK										
ESTONIA	PI	FI	FC	FC	FC	PC	PI	NI		AIXM 5.1 FC
FINLAND	NI									
FRANCE	PI	FI	NC	NC	NC	PC	PI	NI	AIXM 5 : 2021-2023	AIXM 4.5
GEORGIA	FI	FI	FC	FC	FC	FC	FI	NI		EAD
GERMANY	PI	PI	NC	NC	NC	PC	PI	NI	ADQ implementation project	ADQ impl. project delayed due to technological immaturity. Additional compliance is expected to be achieved as the project progresses.
GREECE										
HUNGARY	FI	FI	FC	FC	FC	FC	FI	NI		
IRELAND										
ISRAEL										
ITALY	PI	FI	NC	NC	NC	FC	FI	NI	4,5,6: 2018	AIXM FC
KAZAKHSTAN	FI	FI	FC	NC	FC	FC	FI	NI		
KYRGYZSTAN	PI	NI	FC	FC	FC	NC	NI	NI		EAD
LATVIA	FI	FI	FC	FC	FC	PC	FI	PI	Full IAID with AIXM 5.1 Jun 2017	AIXM 4.5 (5.1 in progress)
LITHUANIA	FI	FI	FC	FC	FC	PC	PI	NI	AIXM: 2016-2017	AIXM 5.1 in progress
LUXEMBOURG	FI	NI	FC	NC	FC	FC	PI	NI	3: 2017	Joint AIP (Belgium/ Luxembourg fully migrated EAD)
MALTA										
MONTENEGRO										
MOROCCO	NI	NI	NC	NC	NC	NC	NI	NI	2018	
NETHERLANDS										
NORWAY	PI	FI	FC	FC	FC	FC	FI	NI		IAID: not impl for AMDB
POLAND										
PORTUGAL	PI	FI	FC	FC	FC	FC	NI	NI	AIXM 5.1 to be	NEW IAID in

State	IAID	eAIP	NOTAM	SNOWTAM	PIB	Charting	Procedure Design	ATS	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
									implemented in 2020	process of implementation
REPUBLIC OF MOLDOVA	PI	FI	FC	FC	FC	FC	FI	NI	2: 2019 7, 9: 2018	AIXM
ROMANIA	NI	NI	NC	NC	NC	NC	NI	NI	3,4,5,6,7,9: 2019	EAD in use.
RUSSIAN FEDERATION	NI	NI	NC	NC	NC	NC	NI	NI	2021	AIXM NC
SERBIA	NI	NI	NC	NC	NC	NC	NI	NI		AIXM 4.5 (EAD)
SLOVAKIA	PI	FI	FC	FC	FC	PC	PI	NI	2018	
SLOVENIA	PI	FI	FC	FC	FC	FC	PI	PI	2018/2019	New IAID for static data in progress
SPAIN	PI	NI	NC	NC	NC	PC	PI	NI	Ongoing project for all items	IAID not fully completed
SWEDEN	FI	FI	FC	FC	FC	FC				AIXM 5.1
SWITZERLAND	PI	NI	FC	FC	FC	PC	PI	NI	2, 3, 7, 8, 9: Under review in the context of the ADQ IR implementation	2: Implemented components of IAID: AIS database 7, 8: Not fully interoperable with IAID.
TAJKISTAN	NI	NI	NC	NC	NC	NC	NI	NI		
FYROM										
TUNISIA										
TURKEY	FI	PI	FC	FC	FC	FC	FI	FI	2: 2017	EAD
TURKMENISTAN	NI	NI	NC	NC	NC	NC	NI	NI		
UKRAINE	PI	FI	NC	NC	NC	NC	NI	NI	2022 Integrated AIM system will cover all items	2: AIP production only
UNITED KINGDOM	FI	FI	FC	FC	FC	FC	FI	FI		Fully (EU) No.73/2010 compliant AIM system using AIXM 5.1 is in place
UZBEKISTAN	NI	NI	NC	NC	NC	NC	NI	NI		AIXM NC

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**TABLE ASBU-EUR-B0-DATM-3-2****Aeronautical Data Quality****EXPLANATION OF THE TABLE**

Column:

- 1 Name of the State or territory.
- 2 Compliance with the requirement for implementation of QMS for Aeronautical Information Services including safety and security objectives, shown by:
  - FC – Fully compliant
  - PC – Partially compliant
  - NC – Not compliant
- 3 Compliance with the requirement for the establishment of formal arrangements with approved data originators concerning aeronautical data quality, shown by:
  - FC – Fully compliant
  - PC – Partially compliant
  - NC – Not compliant
- 4 Implementation of digital data exchange with originators, shown by:
  - FI – Implemented
  - PI – Partially Implemented
  - NI – Not implemented

*Note 1 — Information providing detail of “PI” and “NI” should be given in the Remarks column (percentage of implementation).*
- 5 Compliance with the requirement for metadata, shown by:
  - FC – Fully compliant
  - PC – Partially compliant
  - NC – Not compliant
- 6 Compliance with the requirements related to aeronautical data quality monitoring (accuracy, resolution, timeliness, completeness), shown by:
  - FC – Fully compliant
  - NC – Not compliant
- 7 Compliance with the requirements related to aeronautical data integrity monitoring, shown by:
  - FC – Fully compliant

- NC – Not compliant
- 8 Compliance with the requirements related to the AIRAC adherence monitoring, shown by:  
 FC – Fully compliant  
 NC – Not compliant
- 9 Action Plan — short description of the State’s Action Plan with regard to aeronautical data quality requirements implementation, especially for items with a “PC”, “PI”, “NC” or “NI” status, including planned date(s) of full compliance, as appropriate.
- 10 Remarks — additional information, including detail of “PC”, “NC”, “PI” and “NI”, as appropriate.

State	QMS	Establishment of formal agreements	Digital data exchange with originators	Metadata	Data quality monitoring	Data integrity monitoring	AIRAC adherence monitoring	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
ALBANIA	FC	FC	PI	FC	FC	FC	FC		
ALGERIA	FC						FC		
ARMENIA	FC	PC	NI	FC	FC	FC	FC	2018	
AUSTRIA	FC	PC	PI	PC	FC	FC	FC	2021	
AZERBAIJAN	FC	FC	PI	FC	FC	FC	FC	2018	
BELARUS	FC	FC	NI	NC	NC	NC	FC	2017	
BELGIUM	FC	PC	NI	NC	FC	FC	FC	3, 4 and 5: 2017	
BOSNIA AND HERZEGOVINA	NC						FC		
BULGARIA	FC	FC	NI	PC	PC	FC	FC		
CROATIA	FC						FC		
CYPRUS	FC	PC	FI	PC	FC	FC	FC		80% implemented
CZECH REPUBLIC	FC	PC	NI	PC	FC	NC	FC	2020	3: 75% (under implementation) 4,5,7: 2020
DENMARK	FC						FC		
ESTONIA	FC	PC	PI	NC	FC	NC	FC	Q4 2017	
FINLAND	FC	PC	PI	NC	PC	PC	FC		
FRANCE	FC	PC	PI	NC	PC	PC	FC		3 : 85% implemented. 4 :20% implemented
GEORGIA	FC	PC	NI	FC	FC	NC	FC	3: 2017; 6,7:2018	
GERMANY	FC	PC	PI	PC	PC	PC	FC	ADQ impl. project	(see above)
GREECE	NC						FC		

State	QMS	Establishment of formal agreements	Digital data exchange with originators	Metadata	Data quality monitoring	Data integrity monitoring	AIRAC adherence monitoring	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
HUNGARY	FC	PC	FI	FC	FC	FC	FC	3:2018	3: 20% under implementation
IRELAND	FC						FC		
ISRAEL	FC						FC		
ITALY	FC	PC	PI	PC	PC	FC	FC	3: 2019	
KAZAKHSTAN	FC	FC	PI	FC	FC	NC	FC		4: 25%
KYRGYZSTAN	PC	NC	NI	NC	NC	NC	FC	2: 2017	
LATVIA	FC	FC	FI	FC	FC	FC	FC		
LITHUANIA	FC	FI	PI	PC	PC	PC	FC		
LUXEMBOURG	FC	NC	NI	NC	FC	FC	FC	Action Plan under development	
MALTA	FC						FC		
MONTENEGRO	FC						FC		
MOROCCO	FC	PC	NI	NC	NC	NC	FC	2018	
NETHERLANDS	FC						FC		
NORWAY	FC	FC	FI	FC	FC	FC	FC		
POLAND	FC						FC		
PORTUGAL	FC	PC	PI	NC	FC	NC	FC	2021	3 & 4 : under implementation
REPUBLIC OF MOLDOVA	FC	FC	PI	FC	FC	FC	FC		
ROMANIA	FC	FC	NI	NC	FC	FC	FC	4: 2019	4: Available data exchange by email with CRC32Q verification tool.
RUSSIAN FEDERATION	FC	NC	NI	NC	FC	FC	FC		
SERBIA	FC	PC	NI	PC	NC	NC	FC		
SLOVAKIA	FC	FC	PI	PC	FC	NC	FC	2019	
SLOVENIA	FC	PC	PC	PC	FC	FC	FC		50%
SPAIN	FC	FC	PI	PC	FC	FC	FC	Ongoing for digital data and full metadata exchange	
SWEDEN	FC	FC	FI	PC	FC	FC	FC		

State	QMS	Establishment of formal agreements	Digital data exchange with originators	Metadata	Data quality monitoring	Data integrity monitoring	AIRAC adherence monitoring	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
SWITZERLAND	FC	PC	PI	NC	FC	NC	FC	3, 4, 5, 7: Under review in the context of the ADQ IR implementation.	3: Formal arrangements with relevant originators have been prepared but still have to be aligned with the ADQ IR. 4: 10 % of implementation. 7: Changes are handled in accordance with the data assurance process which has been confirmed to achieve the required level of integrity.
TAJIKISTAN	NC	NC	NI	NC	NC	NC	FC		
FYROM	FC						FC		
TUNISIA	FC						FC		
TURKEY	FC	NC	NI	PC	PC	FC	FC	3: 2018	
TURKMENISTAN	NC	NC	NI	NC	NC	NC	FC		
UKRAINE	FC	PC	NI	PC	FC	FC	FC	3: 2020	5, 6, 7: By EAD
UNITED KINGDOM	FC	FC	FC	FC	FC	FC	FC		
UZBEKISTAN	FC	NC	NI	NC	NC	NC	FC		

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**TABLE ASBU-EUR-B0-DATM-3-3**  
**World Geodetic System-1984 (WGS-84)**

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**EXPLANATION OF THE TABLE**

Column:

- |   |   |
|---|---|
| 1 | Name of the State or territory for which implementation of WGS-84 is required.  |
| 2 | Compliance with the requirements for implementation of WGS-84 for FIR and Enroute points, shown by:<br>FC – Fully compliant<br>PC – Partially compliant<br>NC – Not compliant   |
| 3 | Compliance with the requirements for implementation of WGS-84 for Terminal Areas (arrival, departure and instrument approach procedures), shown by:<br>FC – Fully compliant<br>PC – Partially compliant<br>NC – Not compliant |
| 4 | Compliance with the requirements for implementation of WGS-84 for Aerodrome, shown by:<br>FC – Fully compliant<br>PC – Partially compliant<br>NC – Not compliant  |
| 5 | Compliance with the requirements for implementation of Geoid Undulation, shown by:<br>FC – Fully compliant<br>PC – Partially compliant<br>NC – Not compliant  |
| 6 | Action Plan — short description of the State's Action Plan with regard to WGS-84 implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.   |
| 7 | Remarks — additional information, including detail of "PC" and "NC", as appropriate.  |

State	FIR/ENR	Terminal	AD	GUND	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
ALBANIA	FC	FC	FC	FC		
ALGERIA	FC	FC	FC	FC		
ARMENIA	FC	FC	FC	FC		
AUSTRIA	FC	FC	FC	FC		
AZERBAIJAN	FC	FC	FC	FC		
BELARUS	FC	FC	FC	FC		
BELGIUM	FC	FC	FC	FC		
BOSNIA AND HERZEGOVINA	FC	FC	FC	FC		
BULGARIA	FC	FC	FC	FC		
CROATIA	FC	FC	FC	FC		
CYPRUS	FC	FC	FC	FC		
CZECH REPUBLIC	FC	FC	FC	FC		
DENMARK	FC	FC	FC	FC		
ESTONIA	FC	FC	FC	FC		
FINLAND	FC	FC	FC	FC		
FRANCE	FC	FC	FC	FC		
GEORGIA	FC	FC	FC	FC		
GERMANY	FC	FC	FC	FC		
GREECE	FC	FC	FC	FC		
HUNGARY	FC	FC	FC	FC		
IRELAND	FC	FC	FC	FC		
ISRAEL	FC	FC	FC	FC		
ITALY	FC	FC	FC	FC		
KAZAKHSTAN	FC	FC	FC	FC		
KYRGYZSTAN	FC	FC	FC	FC		
LATVIA	FC	FC	FC	FC		
LITHUANIA	FC	FC	FC	FC		
LUXEMBOURG	FC	FC	FC	FC		
MALTA	FC	FC	FC	FC		
MONTENEGRO	FC	FC	FC	FC		
MOROCCO	FC	FC	FC	FC		
NETHERLANDS	FC	FC	FC	FC		
NORWAY	FC	FC	FC	FC		
POLAND	FC	FC	FC	FC		
PORTUGAL	FC	FC	FC	FC		
REPUBLIC OF MOLDOVA	FC	FC	FC	FC		



State	FIR/ENR	Terminal	AD	GUND	Action Plan	Remarks
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
ROMANIA	FC	FC	FC	FC		
RUSSIAN FEDERATION	FC	FC	FC	FC		
SERBIA	FC	FC	FC	FC		
SLOVAKIA	FC	FC	FC	FC		
SLOVENIA	FC	FC	FC	FC		
SPAIN	FC	FC	FC	FC		
SWEDEN	FC	FC	FC	FC		
SWITZERLAND	FC	FC	FC	FC		
TAJIKISTAN	NC	NC	NC	NC		
FYROM	FC	FC	FC	FC		
TUNISIA	FC	FC	FC	FC		
TURKEY	FC	FC	FC	FC		
TURKMENISTAN	NC	NC	NC	NC	2018	
UKRAINE	FC	FC	FC	FC		
UNITED KINGDOM	FC	FC	FC	FC		
UZBEKISTAN	FC	NC	NC	NC	2018	

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**TABLE ASBU-EUR-B0-DATM-3-4****Provision of the required Terrain and Obstacle data sets****EXPLANATION OF THE TABLE****Column**

- |   |   |
|---|---|
| 1 | Name of the State or territory for which the Terrain and Obstacle data sets are required.   |
| 2 | Compliance with requirement for the provision of Terrain data sets for Area 1, shown by:<br>FC – Fully Compliant<br>PC – Partially Compliant<br>NC – Not Compliant  |
| 3 | Compliance with requirement for the provision of Terrain data sets for Area 2a, including the take-off flight path area (Annex 15, 10.1.5b refers) and the area bounded by the lateral extent of the aerodrome obstacle limitation surfaces (Annex 15, 10.1.5c refers), shown by:<br>FC – Fully Compliant<br>PC – Partially Compliant<br>NC – Not Compliant   |
| 4 | Compliance with requirement for the provision of Terrain data sets for Area 4, shown by:<br>FC – Fully Compliant<br>PC – Partially Compliant<br>NC – Not Compliant<br>N/A – Not Applicable<br><i>Note 1 — The requirement is applicable only for international aerodrome(s) CAT II/III.</i>   |
| 5 | Compliance with requirement for the provision of Obstacle data sets for Area 1, shown by:<br>FC – Fully Compliant<br>PC – Partially Compliant<br>NC – Not Compliant   |
| 6 | Compliance with requirement for the provision of Obstacle data sets for Area 2a, including the objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area (Annex 15, 10.1.6b refers) and the penetrations of the aerodrome obstacle limitation surfaces (Annex 15, 10.1.6c refers), shown by:<br>FC – Fully Compliant<br>PC – Partially Compliant<br>NC – Not Compliant |

- 7 Compliance with requirement for the provision of Obstacle data sets for Area 4, shown by:  
 FC – Fully Compliant  
 PC – Partially Compliant  
 NC – Not Compliant  
 N/A – Not Applicable  
*Note 2 — The requirement is applicable only for international aerodrome(s) CAT II/III.*
- 8 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of the required Terrain and Obstacle data sets, especially for items with a “PC” or “NC” status.
- 9 Remarks— additional information, including detail of “PC” or “NC”, as appropriate.

State	Terrain data sets			Obstacle data sets			Action Plan	Remarks
	Area 1	Area 2a	Area 4	Area 1	Area 2a	Area 4		
1	2	3	4	5	6	7	8	9
ALBANIA	FC	FC	FC	PC	FC	FC		5: Lack out of Tirana TMA
ALGERIA	NC	NC	NC	NC	NC	NC		
ARMENIA	FC	FC	FC	FC	FC	FC		4,7: UDYZ
AUSTRIA			NC	PC	PC	PC	2020	
AZERBAIJAN	NC	NC	NC	PC	NC	NC		
BELARUS	FC	NC	NC	FC	PC	NC	2017	
BELGIUM	FC	NC	NC	FC	NC	NC		
BOSNIA AND HERZEGOVINA	FC	NC	FC	NC	NC	FC		
BULGARIA	NC	NC	NC	NC	NC	NC		
CROATIA	NC	NC	NC	NC	NC	NC		
CYPRUS	FC	NC	FC	FC	NC	FC		
CZECH REPUBLIC	FC	NC	NC	FC	NC	NC	2021	
DENMARK	FC	NC	NC	NC	NC	NC		
ESTONIA	FC	FC	N/A	PC	PC	N/A		
FINLAND	FC	FC	FC	FC	PC	FC		5: Electronic list of obstacles
FRANCE	FC	FC	PC	FC	FC	PC		4,7: LFBO, LFST, LFPG, LFBD, LFLL, LFPO
GEORGIA	NC	NC	N/A	NC	NC	N/A	2019	
GERMANY	FC	NC	NC	FC	NC	NC		
GREECE	NC	NC	NC	NC	NC	NC		
HUNGARY	NC	NC	NC	FC	PC	FC		6: LHBP, LHUD available
IRELAND	FC		NC	NC		NC		
ISRAEL	NC	NC	N/A	NC	NC	N/A	5: 2018	
ITALY	NC	NC	NC	NC	NC	NC		

State	Terrain data sets			Obstacle data sets			Action Plan	Remarks
	Area 1	Area 2a	Area 4	Area 1	Area 2a	Area 4		
1	2	3	4	5	6	7	8	9
KAZAKHSTAN	NC	NC	NC	FC	FC	FC	2018	
KYRGYZSTAN	NC	NC	NC	NC	NC	NC		
LATVIA	FC	FC	FC	FC	FC	FC		4, 7: EVRA RWY18/36
LITHUANIA	FC	FC	FC	FC	PC	PC		
LUXEMBOURG	NC	NC	NC	NC	NC	NC	2017	In progress
MALTA	NC		NC	NC		NC		
MONTENEGRO	FC			NC				
MOROCCO	NC	NC	NC	NC	NC	NC	2017-2023	
NETHERLANDS	NC		NC	NC		NC		
NORWAY	FC	FC	FC	FC	FC	FC		
POLAND	NC		NC	FC		NC		
PORTUGAL	FC	NC	NC	PC	PC	NC	3, 4, 5, 6 & 7- Implementation Plan on going	4, 7: LPPT, LPPR, LPFR
REPUBLIC OF MOLDOVA	FC	FC	FC	FC	FC	FC		
ROMANIA	NC	NC	NC	NC	NC	NC	2020	
RUSSIAN FEDERATION	PC	PC	PC	FC	PC	FC	2021	
SERBIA	FC	NC	NC	NC	NC	NC		
SLOVAKIA	FC	FC	FC	FC	NC	PC		4, 7: LZIB, LZKZ
SLOVENIA	FC	FC	FC	FC	FC	FC		
SPAIN	FC	NC	PC	FC	FC	PC	Ongoing area 2 terrain	Missing some area 4 terrain & obstacle data; in progress
SWEDEN	FC	NC	NC	NC	PC	PC		Project on-going
SWITZERLAND	PC	PC	PC	PC	NC	NC	2-7: First step: adaptation of national law by 2021 in order to implement the "Obstacle Concept Switzerland"	2, 3, 4: Terrain data available in a different format – detailed information is published in the AIP under GEN 1.7 / GEN 3.1 5, 6, 7: Obstacle data for Area 1 available – detailed information is published in the AIP under GEN 1.7 / GEN 3.1
TAJIKISTAN	NC	NC	NC	NC	NC	NC		
FYROM				NC				
TUNISIA	NC	NC	N/A	NC	NC	N/A		
TURKEY	FC	FC	FC	FC	FC	FC		
TURKMENISTAN	NC	NC	NC	NC	NC	NC		
UKRAINE	FC	PC	PC	FC	PC	PC		4, 7: UKHH, UKBB, UKLL
UNITED KINGDOM	PC	PC	PC	PC	PC	PC	2023	Transition plan included in CAP 1732
UZBEKISTAN	NC	NC	NC	NC	NC	NC		

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**TABLE ASBU-III-EUR-2 – EUR REGION IMPLEMENTATION STATUS OF BLOCK 1 MODULE  
ELEMENTS**

	<b>FURTHER WORK REQUIRED</b>	
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**TABLE ASBU- EUR-B1 – AMET: ENHANCED OPERATIONAL DECISIONS THROUGH INTEGRATED METEOROLOGICAL INFORMATION  
(PLANNING AND NEAR-TERM SERVICE)**

**Description and purpose**

To enable the reliable identification of solutions when forecast or observed meteorological conditions impact aerodromes, airspace or operations in general. Full ATM-Meteorology integration is needed to ensure that meteorological information is included in the logic of a decision process and the impact of the meteorological conditions on the operations are automatically derived, understood and taken into account. The supported decision time-horizons range from minutes, to several hours or days ahead of the ATM operation. This includes optimum flight profile planning and execution, and support to tactical in-flight avoidance of hazardous meteorological conditions (improved in-flight situational awareness) to typical near-term and planning (>20 minutes) type of decision making. This module promotes the establishment of standards for global exchange of the MET information closely aligned with other data domains and adhering to a single reference (ICAO-AIRM). It also promotes the further enhancement of meteorological information on various quality-of-service aspects including the accuracy and consistency of the data when used in inter-linked operational decision making processes.

Appreciating that the number of flights operating on cross-polar and trans-polar routes continues to steadily grow and recognizing that space weather affecting the earth's surface or atmosphere (such as solar radiation storms) pose a hazard to communications and navigation systems and may also pose a radiation risk to flight crew members and passengers, this module acknowledges the need for space weather information services in support of safe and efficient international air navigation.

This module builds, in particular, upon Module B0-AMET, which detailed a sub-set of all available meteorological information that can be used to support enhanced operational efficiency and safety.

**Main performance impact:**

KPA-01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	Y	Y

**Applicability consideration:**

Applicable to traffic flow planning, and to all aircraft operations in all domains and flight phases, regardless of level of aircraft equipage.

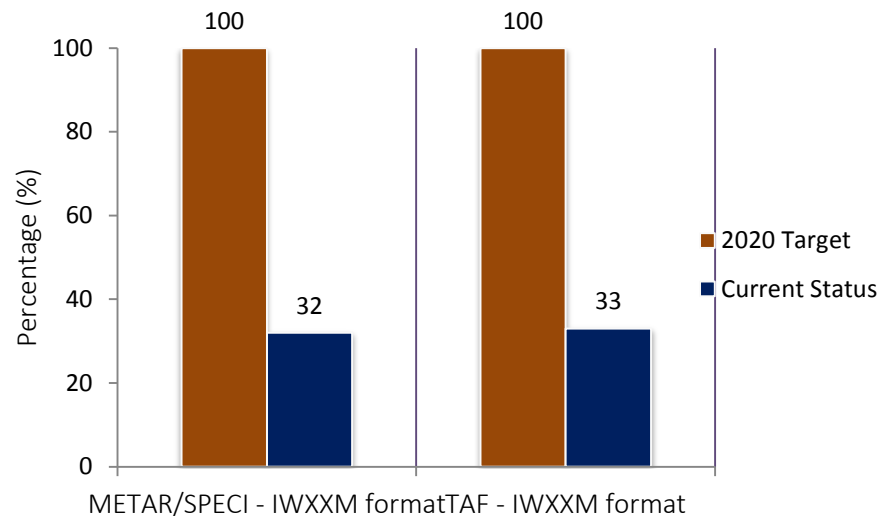
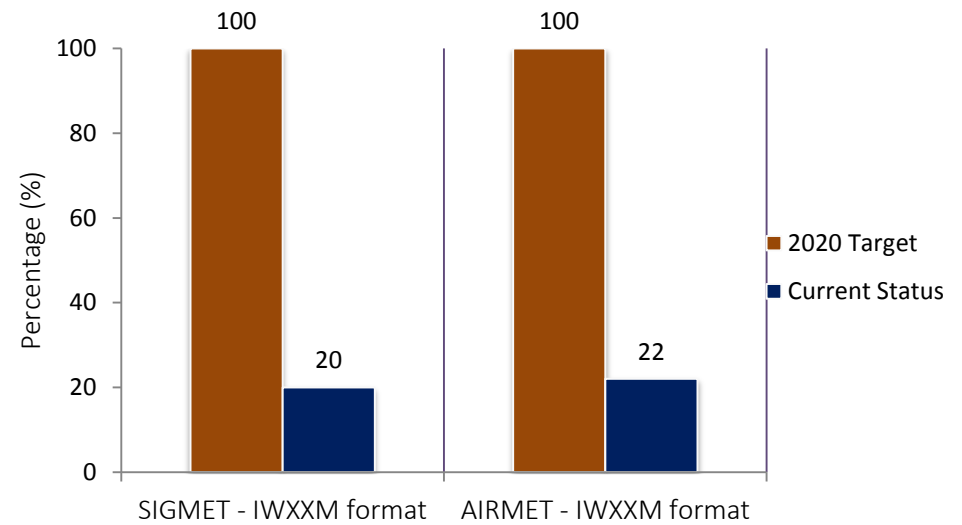
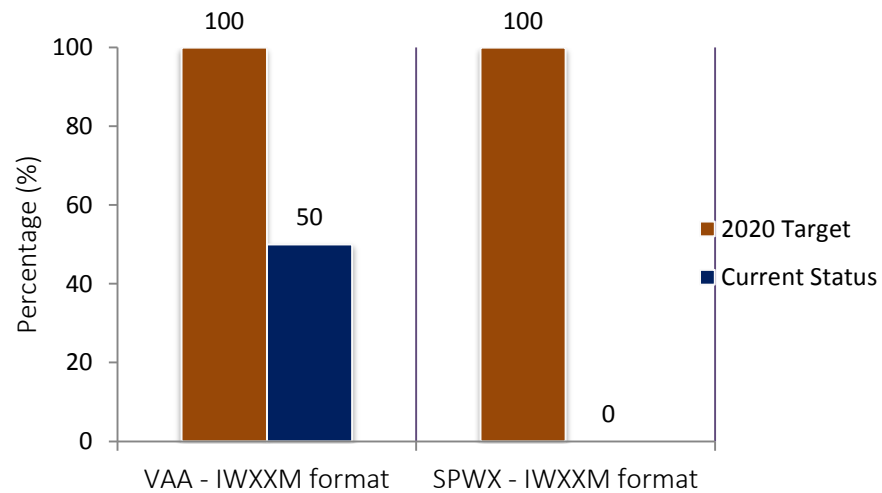
Though not explicit in ICAO Doc 9750, the implementation of providing a suite of MET products (METAR/SPECI, TAF, SIGMET, AIRMET, TCA, VAA and SWXA) in IWXXM format is a prerequisite to the System Wide Information Management (SWIM) and a requirement during the ASBU-B1 time frame (requirement 5 November 2020). Therefore, these elements in IWXXM format will be measured in EUR ANP Volume III.

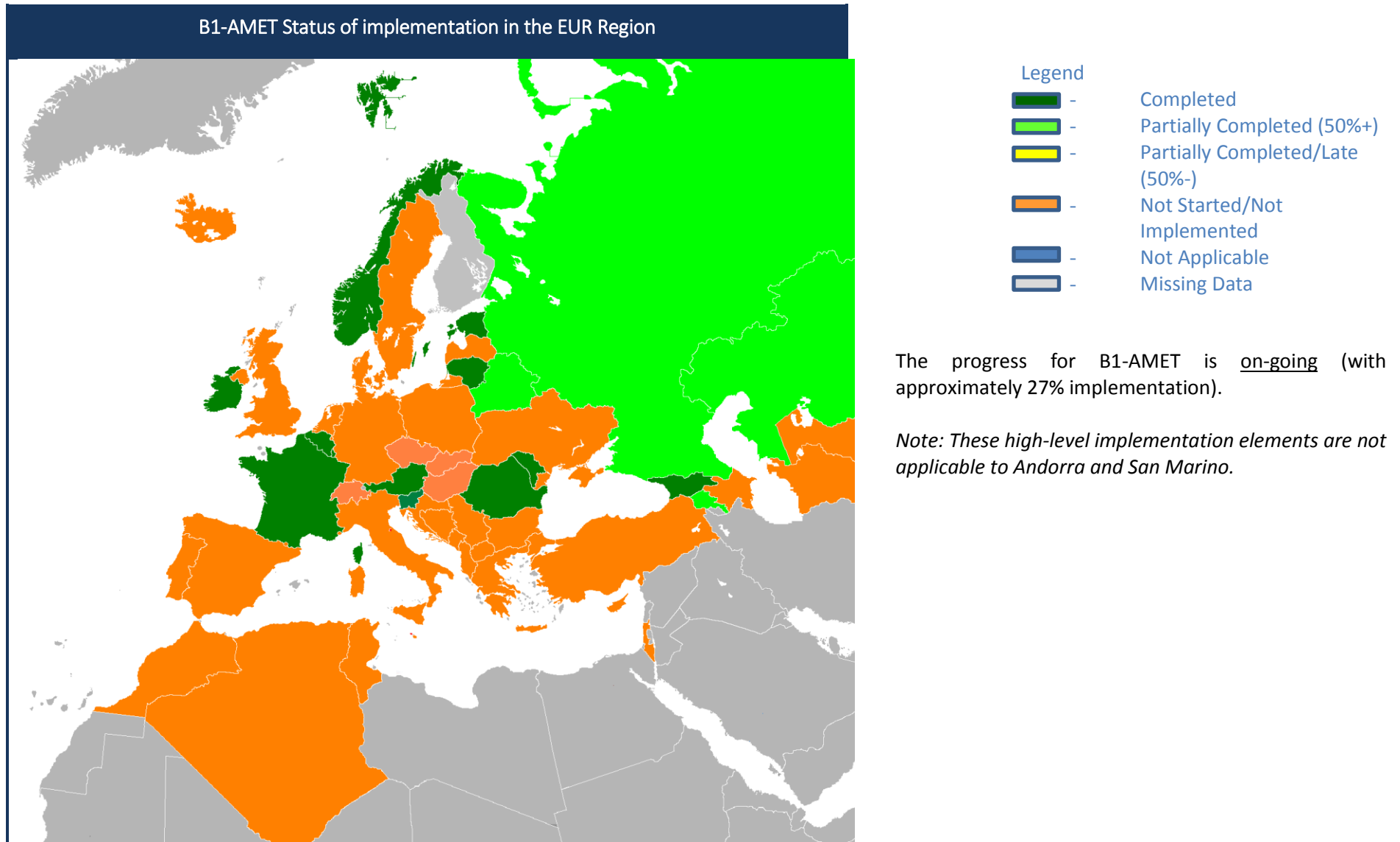
<i>Elements in IWXXM format</i>	<i>Applicability</i>	<i>Performance Indicators/Supporting Metrics</i>	<i>Targets</i>
METAR/SPECI	<i>States where METAR/SPECI is required as per the EUR ANP Volume II, Table MET II-2</i>	Indicator: % of relevant States having implemented METAR/SPECI in IWXXM format Supporting metric: number of relevant States having implemented METAR/SPECI in IWXXM format	100% by Nov 2020
TAF	<i>States where TAF is required as per the EUR ANP Volume II, Table MET II-2</i>	Indicator: % of relevant States having implemented TAF in IWXXM format Supporting metric: number of relevant States having implemented TAF in IWXXM format	100% by Nov 2020
SIGMET	<i>States who designated a Meteorological Watch Office to provide SIGMET for a FIR (or FIRs) as per the EUR ANP Volume II, Table MET II-1</i>	Indicator: % of relevant States having implemented SIGMET in IWXXM format Supporting metric: number of relevant States having implemented SIGMET in IWXXM format	100% by Nov 2020
AIRMET	<i>States who designated a Meteorological Watch Office to provide AIRMET for a FIR (or FIRs) as per the EUR ANP Volume II, Table MET II-1</i>	Indicator: % of relevant States having implemented AIRMET in IWXXM format Supporting metric: number of relevant States having implemented AIRMET in IWXXM format	100% by Nov 2020

<i>Elements in IWXXM format</i>	<i>Applicability</i>	<i>Performance Indicators/Supporting Metrics</i>	<i>Targets</i>
VAA	<b><i>France, United Kingdom</i></b>	Indicator: % of VAACs in the EUR Region having implemented Volcanic Ash Advisories (VAA) in IWXXM format Supporting metric: number of States hosting a VAAC having implemented VAA in IWXXM format	100% by Nov 2020
TCA	<b><i>Not applicable in EUR Region</i></b>	N/A	N/A
SWXA	<b><i>Finland, France</i></b>	Indicator: % of Space Weather Centres in the EUR Region having implemented Space Weather Advisories (SWXA) in IWXXM format Supporting metric: number of States hosting a SPWXC having implemented SWXA in IWXXM format	100% by Nov 2020

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**B1-AMET Status of implementation in the EUR Region****B1-AMET Status of implementation in the EUR Region****B1-AMET Status of implementation in the EUR Region****B1-AMET Status of implementation in the EUR Region**



Module	Elements in IWXXM format	Albania	Algeria	Armenia	Austria	Azerbaijan	Belarus	Belgium	Bosnia and Herzegovina	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland
B1-AMET	METAR/SPECI															
	TAF															
	SIGMET															
	AIRMET															
	VAA															
	TCA															
	SPWA															

Module	Elements in IWXXM format	France	Georgia	Germany	Greece	Hungary	Ireland	Israel	Italy	Kazakhstan	Kyrgyzstan	Latvia	Lithuania	Luxembourg	Malta	Monaco
B1-AMET	METAR/SPECI															
	TAF															
	SIGMET															
	AIRMET															
	VAA															
	TCA															
	SPWA															

Module	Elements	Montenegro	Morocco	Netherlands	North Macedonia	Norway	Poland	Portugal	Republic of Moldova	Romania	Russian Federation	Serbia	Slovakia	Slovenia	Spain	Sweden
B1-AMET	METAR/SPECI															
	TAF															
	SIGMET															
	AIRMET															
	VAA															
	TCA															
	SPWA															

Module	Elements	Switzerland	Tajikistan	Tunisia	Turkey	Turkmenistan	Ukraine	United Kingdom	Uzbekistan
B1-AMET	METAR/SPECI								
	TAF								
	SIGMET								
	AIRMET								
	VAA								
	TCA								
	SPWA								

**TABLE ASBU-III-EUR-3 – EUR REGION IMPLEMENTATION STATUS OF BLOCK 2 MODULE  
ELEMENTS  
FURTHER WORK REQUIRED**

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**TABLE ASBU-III-EUR-4 – EUR REGION IMPLEMENTATION STATUS OF BLOCK 3 MODULE  
ELEMENTS  
FURTHER WORK REQUIRED**

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**EUR ANP, VOLUME III**  
**PART III - AIR NAVIGATION SYSTEM/REGIONAL AVIATION SYSTEM**  
**IMPROVEMENT (RASI) IMPLEMENTATION**

**1. INTRODUCTION**

1.1 Part III indicates the implementation status of planned improvements to the EUR Region aviation system which are not covered in Part II. (e.g. additional functionalities exceeding Block 0 requirements such as detailed in the European ATM Master Plan, etc.)

1.2 To be developed...

- END -

**Companion Document**  
*ASBU Implementation Monitoring Report, ICAO EUR States, Reference Period 2018*