AIRM 1.1.0 Release Note

This document presents the release note accompanying the AIRM version 1.1.0.

It describes the main drivers for this AIRM version 1.1.0 release and contains the overview of the changes that have been implemented since AIRM version 1.0.0.

Document History

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| --- | --- | --- | --- | --- |
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| 00.00.01 | 23-05-2022 | Draft | Yi XIONG | New document |
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# Introduction

## Purpose of the document

This document presents the release note of the AIRM version 1.1.0. The release note describes the main drivers for change and contains the overview of the changes that have been implemented since AIRM 1.0.0.

## Intended readership

The target audience for the document is:

* AIRM community members
* XMs community members
* ICAO IMP members
* Any other stakeholders who are interested in the evolution of AIRM

## Acronyms

| Acronym | Definition |
| --- | --- |
| AIRM | ATM Information Reference Model |
| AIXM | Aeronautical Information Exchange Model |
| ATM | Air Traffic Management |
| CCB | Change Control Board |
| FF-ICE | Flight and Flow in Collaborative Environment |
| FIXM | Flight Information Exchange Model |
| ICAO | International Civil Aviation Organization |
| IM | Information Management |
| IMP | Information Management Panel |
| IWXXM | ICAO Meteorological Information Exchange Model |
| PANS | Procedure for Air Navigation Services |
| NAF | NATO Architecture Framework |
| SESAR | Single European Sky Air Traffic Management Research |
| UML | Unified Modelling Language |
| URN | Uniform Resource Name |
| XM | Exchange Model |

# Release Note

## Drivers for change

The AIRM version 1.0.0 was deployed following research and refinement in cooperation with international partners. The AIRM version 1.0.0 was endorsed by the ICAO Air Navigation Commission Information Management Panel (IMP) at their second meeting in 2021 [1].

The AIRM follows the evolutionary changes of the XM communities (i.e. AIXM, FIXM and IWXXM) which are the main drivers of the changes for the AIRM.

The AIRM 1.1.0 mainly contains the changes related to:

* Applicable draft version of the ICAO FF-ICE Release 1 vocabulary regarding Dangerous Goods and FF-ICE Services and Messages[[1]](#footnote-1);
* AIXM CCB approved changes for the draft version of the AIXM 5.2;
* Corrections and additions requested by the AIRM Community (e.g. EUROCONTROL and SESAR).

The AIRM changes related to exchange models were coordinated with the XM-community concerned in accordance with the XM-coordination process set out in the AIRM change management handbook [2]. For each of the XM-community, a liaison was designated to coordinate the changes between the specific XM-community and the AIRM CCB.

The AIRM changes are coordinated with ICAO IMP following the coordination process between the AIRM CCB and the IMP. During the IMP/2, the members of the IMP reviewed the release plan of AIRM 1.1.0 which includes the list of CRs approved by the AIRM CCB targeting their integration into AIRM 1.1.0.

## Overview of the change requests

This paragraph includes the list of the change requests that have been integrated in AIRM 1.1.0. In total, 18 groups of changes were implemented since AIRM 1.0.0.

More details about each change request are available in the AIRM Community Area [3].

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **AIRM baseline release** | **CR**  **title** | **CR**  **description** | | **CR**  **context/purpose** | **AIRM**  **release version** | **XM coordination acknowledgement** |
| 1 | v1.0.0 | [Promoting FF-ICE R1 Vocabulary – Dangerous Goods](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Promoting%20FFICE-R1%20vocabulary%20-%20Dangerous%20Goods.docx) | Update AIRM to take into account the revised ICAO FF-ICE Release 1 vocabulary related to Dangerous Goods that is captured in FIXM Core 4.2.0. | | Alignment with ICAO & XM | v1.1.0 | FIXM CCB |
| 2 | v1.0.0 | [Promoting FF-ICE Release1 Vocabulary - FF-ICE Services and Messages](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Promoting%20FFICE-R1%20vocabulary%20-%20Services%20and%20Messages.docx) | Update AIRM to take account the revised ICAO FF-ICE Release 1 vocabulary related to FF-ICE/R1 Services and Messages. | | Alignment with ICAO | v1.1.0 | FIXM CCB |
| 3 | v1.0.0 | [Add 'Take Off Not Before'](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Take%20Off%20Not%20Before.docx) | Airport operations sometimes define a TONB (Take off not before) time, but this is not modelled in the AIRM. | | Addition | v1.1.0 | FIXM CCB |
| 4 | v1.0.0 | [AIXM 5.2 Routes changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_routes.docx) | Update AIRM to take account the changes made to AIXM 5.2 routes in order to ensure consistency. | | Alignment with XM | v1.1.0 | AIXM CCB |
| 5 | v1.0.0 | [AIXM 5.2 Procedures changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_procedures.docx) | Update AIRM to take account the changes made to AIXM 5.2 procedures in order to ensure consistency. | | Alignment with XM | v1.1.0 | AIXM CCB |
| 6 | v1.0.0 | [AIXM 5.2 Obstacles changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_obstacles.docx) | Update AIRM to take account the changes made to AIXM 5.2 obstacles in order to ensure consistency | | Alignment with XM | v1.1.0 | AIXM CCB |
| 7 | v1.0.0 | [AIXM 5.2 Navaid/Point changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_navaids_points.docx) | Update the Navaid and Points subjects to include codeICAOCountry in line with AIXM 5.2 changes. | | Alignment with XM | v1.1.0 | AIXM CCB |
| 8 | v1.0.0 | [AIXM 5.2 Airspace changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_airspace.docx) | Update AIRM to take account the changes made to AIXM 5.2 airspace in order to ensure consistency. | | Alignment with XM | v1.1.0 | AIXM CCB |
| 9 | v1.0.0 | [AIXM 5.2 Airport/Heliport changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_airport_heliport.docx) | Update AIRM to take account the changes made to AIXM 5.2 airport/heliport in order to ensure consistency | | Alignment with XM | v1.1.0 | AIXM CCB |
| 10 | v1.0.0 | [AIXM 5.2 transversal changes](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_for_AIXM_transversal.docx) | Update AIRM to take account the changes made to AIXM 5.2 in order to ensure consistency. This covers changes that affect the model in general. | | Alignment with XM | v1.1.0 | AIXM CCB |
| 11 | v1.0.0 | [Annex15\_andPANS\_AIM\_updates](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Annex15_and_PANS_AIM_updates.docx) | Update the list of business terms to reflect the latest version of ICAO Annex 15 (16the Edition) and PANS-AIM (1st Edition) | | Alignment with ICAO | v1.1.0 | AIXM CCB |
| 12 | v1.0.0 | [Update definitions for typos](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Update_definitions_for_typos.docx) | Update some definitions of properties to correct typos. | | Correction | v1.1.0 | Not applicable |
| 13 | v1.0.0 | [Correction in the data object UsageConditions to reflect the correct definitions of the roles of flight and aircraftType.](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Correction%20in%20the%20data%20object%20UsageConditions%20to%20reflect%20the%20correct%20definitions%20of%20the%20roles%20of%20flight%20and%20aircraftType.docx) | Correction in the data object UsageConditions to reflect the correct definitions of the roles of flight and aircraftType. | | Correction | v1.1.0 | Not applicable |
| 14 | v1.0.0 | [Remove superfluous repetition in "Abstract Entities" diagram](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Remove%20repetition%20in%20AbstractEntities%20diagram.docx) | The metadata association from EntityCollection to MD\_Metadata and the annotation aggregation from EntityCollection to Note are redundant, as they are inherited from the Entity base class. | | Correction | v1.1.0 | Not applicable |
| 15 | v1.0.0 | [Move\_AIRM\_abbreviation](ttps://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Move_AIRM_abbreviation.docx) | Addition of the abbreviation of "AIRM" to the contextual model. | | Correction | v1.1.0 | Not applicable |
| 16 | v1.0.0 | [Improve definition ATFMDepartureSlot.toleranceWindow](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Improve%20definition%20ATFMDepartureSlot.toleranceWindow.docx) | This CR is launched to improve the current definition of ATFMDepartureSlot.toleranceWindow. | Improvement (European supplement) | | v1.1.0 | Not applicable |
| 17 | v1.0.0 | [Voice Communication services for the Virtual Centre](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Voice%20Communication%20services%20for%20the%20Virtual%20Centre.docx) | Model Voice Communication services for the Virtual Centre. | Addition (European supplement) | | v1.1.0 | Not applicable |
| 18 | v1.0.0 | [CoordinationAndTransferConstraint](https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Coordinate%20and%20Transfer.docx) | Extend logical model with "CoordinationAndTransferConstraint" and “TransferData”. | Addition (European supplement) | | v1.1.0 | Not applicable |

## Change Report

This paragraph presents the report of the individual changes. In general, AIRM changes occur in three types: Addition, Modification and Deletion. In version 1.1.0, most of the changes were Additions and none of the concepts were deleted.

### Additions

The following list summarizes the added concepts:

* 22 new terms/abbreviations added in the Contextual model;
* 7 new entities added in the Conceptual model;
* 120 new entities/properties added in the Logical model;
* 2 new terms/abbreviations added in the Contextual model of the European Supplement;
* 1 new entity added in the Conceptual model the European Supplement;
* 61 new entities/properties added in the Logical model of the European Supplement.

The attached file includes the detailed list of changed entities:



### Modifications

The definition of ATFMDepartureSlot.toleranceWindow (no.16 of the list in paragraph 3.2) was improved and there was no change to the concept itself or the URN.

### Deletion

No concepts were deleted in AIRM version 1.1.0.

# References

| No. | Title | Location |
| --- | --- | --- |
|  | IMP/2-WP/7 | <https://ost.eurocontrol.int/sites/airm/Document%20Repository/AIRM%20CCB%20Meetings/2021_11_30_AIRM_CCB_15/IMP_2%20WP007%20-%20AIRM_final.pdf> |
|  | AIRM Change Management Handbook | <https://ost.eurocontrol.int/sites/airm/Document%20Repository/AIRM_Change_Management_Handbook.docx> |
|  | AIRM Community Area | <https://ost.eurocontrol.int/sites/airm/AIRM%20Change%20Requests/Forms/AllItems.aspx?InitialTabId=Ribbon%2ELibrary&VisibilityContext=WSSListAndLibrary> |

1. Note: the FF-ICE related changes integrated in the AIRM 1.1.0 were based on the mature draft content of the FF-ICE Release 1, however these changes may need revision when the FF-ICE Release 1 is officially published. [↑](#footnote-ref-1)