



## **FIXM Strategy**

The Flight Information Exchange Model (FIXM) is an exchange model capturing Flight and Flow information that is globally standardised. The requirement for FIXM was identified by the International Civil Aviation Organisation (ICAO) Air Traffic Management Requirements and Performance Panel (ATMRPP) and endorsed at the 12th Air Navigation Conference as part of the Aviation System Block Upgrades (ASBU) and as described in Flight and Flow Information for a Collaborative Environment (FF-ICE).

This document details the high-level requirements on the FIXM content, structure and scope to guide the overall FIXM evolution.

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**The authoritative reference for FIXM is [www.FIXM.aero](http://www.FIXM.aero).**

**Details on the FIXM CCB and a list of its members is available on request from [FIXM\\_Secretariat@lists.eurocontrol.int](mailto:FIXM_Secretariat@lists.eurocontrol.int)**

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## Document History

Version	Author	Description of Changes
1.0	FIXM CCB	First official release.
1.1	FIXM CCB	<ul style="list-style-type: none"> <li>- New Appendix A detailing the FIXM Core vs FIXM Extension criteria</li> <li>- New Appendix B describing the applicable categorisation of FIXM Extensions</li> <li>- Changes to chapters 1.1, 2.1, 2.2, 2.3, 2.4.2, 2.4.3, 2.5, 3.1.</li> <li>- Former Chapter 3 (V&amp;V) is deleted</li> </ul>
2.0	FIXM CCB	<ul style="list-style-type: none"> <li>- Chapter 2.2 is revisited to introduce the FIXM Applications</li> <li>- FIXM Extensions moved under Chapter 2.2</li> <li>- New Chapter 2.3 about the catalogue of third party FIXM Applications/Extensions</li> <li>- Chapter 2.5.3 (FIXM and AIRM) is revised to reflect latest IMP thinking</li> <li>- Appendix A and B are revisited in the light of the changes introduced to chapters 2.3. and 2.5.</li> </ul>

# 1 Introduction

## 1.1 Introduction to FIXM

The Flight Information Exchange Model (FIXM) is an exchange model capturing Flight and Flow information that is globally standardised. The requirement for FIXM was identified by the International Civil Aviation Organisation (ICAO) [1][2][3][4][5] Air Traffic Management Requirements and Performance Panel (ATMRPP) and endorsed at the 12th Air Navigation Conference as part of the Aviation System Block Upgrades (ASBU) and as described in Flight and Flow Information for a Collaborative Environment (FF-ICE) [6].

FIXM is the equivalent, for the Flight domain, of AIXM (Aeronautical Information Exchange Model) and WXXM (Weather Information Exchange Model) both of which were developed in order to achieve global interoperability for, respectively, AIS and MET information exchange. FIXM is therefore part of a family of technology independent, harmonized and interoperable information exchange models designed to cover the information needs of Air Traffic Management.

According to the ICAO SWIM concept [11], FIXM is one of the models that belong to the “Information Exchange Models” layer of the ICAO SWIM Global Interoperability framework.

## 1.2 Purpose of the document

This document details the high-level requirements on the FIXM content, structure and scope to guide the overall FIXM evolution.

## 1.3 Revision process

This document is approved and published by the FIXM Change Control Board (CCB). Future evolutions of the document shall be managed via the FIXM change management [10].

# 2 FIXM Requirements

This chapter lists the strategic requirements for FIXM. These requirements are expressed at a high level; they are expressed in order to ensure FIXM is developed according to a plan that is aligned with the expectations of the ICAO Aviation System Block Upgrades (ASBU) [7] and key FIXM stakeholders.

### Interpretation

The operative verb “shall” is used for formal requirements. The operative verb “should” is used for recommendations. Formal requirements are mandatory and must be satisfied by FIXM. Recommendations are not mandatory; however, compliance is strongly advised, and non-compliance must be justified.

## 2.1 FIXM Change Management

FIXM change management shall be established to manage the development of FIXM over time in order to:

- Ensure that FIXM is developed in a transparent manner.
- Ensure the standard strives to meet the needs of all FIXM stakeholders within the ATM community.
- Focus communication regarding FIXM development within the ATM community and beyond.

The FIXM CCB shall provide this change management.

The FIXM charter [10] describes the principles of the FIXM change management, and the exact roles and responsibilities of the FIXM actors.

## 2.2 FIXM Components and Artefacts

The term **FIXM** refers collectively to:

- **FIXM Core**, as described in chapter 2.2.1;
- The **FIXM Applications** managed by the FIXM CCB as described in chapter 2.2.2;
- The **supporting FIXM artefacts** managed by the FIXM CCB, as described in chapter 2.2.3;
- The **FIXM Extensions** managed by the FIXM CCB, as described in chapter 2.2.4.

### 2.2.1 FIXM Core

**FIXM Core** shall contain the pieces of flight information that are globally applicable and which are endorsed by the FIXM CCB. At minimum this shall include the scope of the FF-ICE provisions. *Appendix A – Eligibility criteria for FIXM Core* further details the criteria for unambiguously deciding whether given pieces of information qualify for FIXM Core.

**FIXM Core** shall be managed by the FIXM CCB.

**FIXM Core** shall be composed of the following components:

- The **FIXM Core Logical Model** shall capture in UML all the constructs that are required for flight information exchange at a global level. It shall detail the data entities, their attributes and containment relationships. The FIXM Core Logical Model shall define an extension mechanism that allows data entities, attributes and relationships to be provided in addition to the core model. The constructs defined in the FIXM Core Logical Model shall be derived from, and traced to, the ICAO requirements for FIXM.
- A **FIXM Core Physical Model** shall be a realisation of the FIXM Logical Model defining a physical representation of the logical model to be used for data exchanges between systems. A FIXM Core Physical Model shall represent constructs described in the FIXM Core Logical Model. The approved physical models are listed below.
  - The **FIXM Core XML Schemas** shall be a physical representation, expressed as a XML Schema Definition (XSD). Its use should primarily target ground-ground exchanges, as XML is not yet considered applicable for flight information exchanges between air (aircraft) and ground. The FIXM Core XML Schemas shall be programmatically derived from the FIXM Core Logical Model.

**FIXM Core** may include additional physical representations of the FIXM Core Logical Model (i.e. additional physical models), as appropriate. For instance, a physical representation of the FIXM Core Logical Model supporting air-ground exchanges may be developed in the future and included in FIXM. Such additional physical representations of the FIXM Core Logical Model would officially qualify for FIXM if endorsed by the FIXM change management (see chapter 2.1).

### 2.2.2 FIXM Applications

A **FIXM Application** addresses how the flight data elements from FIXM Core are packaged and used in terms of information service payload within a specific context of application.

A **FIXM Application** should be composed of the following components:

- A **logical representation** capturing in UML all the relevant message data items exchanged in the context of application, and (at least) one **physical realisation** derived from the logical representation.
- A set of **message templates** defining the restricted message and flight data subsets that are relevant for the given message transactions.

A **FIXM Application** can evolve independently from FIXM Core and should be extensible.

The **FIXM Applications managed by the FIXM CCB** shall cover at least the use of FIXM Core in the context of FF-ICE.

### 2.2.3 FIXM Supporting artefacts

The supporting FIXM artefacts should include, at least:

- The **FIXM Primer**: this document shall serve as a high-level introduction to FIXM, targeting the widest possible audience. It shall include references to the main FIXM components, to the FIXM artefacts listed below, and to this FIXM Strategy document.
- **Requirements Traceability Reports** for FIXM Core and the FIXM Application for FF-ICE: these reports shall provide evidence that the content of FIXM Core and of the FIXM Application for FF-ICE satisfy, and are duly traceable to, the applicable ICAO requirements for FF-ICE.
- **Release Notes**: these notes shall list the FIXM CCB-approved changes integrated into the different versions of the FIXM components.
- The **FIXM User Manual**: this document shall provide guidance and clarifications for the implementation of FIXM. It shall cover rules and guidance for the good use of FIXM in all contexts, rules and guidance for the good use of FIXM in the specific context of FF-ICE, including the translation of FF-ICE Messages into ATS messages, illustrative data samples, and guidance for the development FIXM Applications and Extensions by third parties. The FIXM User Manual should be made available as an online documentation.
- **Online FIXM model and schema documentation**: this is an online HTML description of the content of the FIXM components. This documentation shall be derived programmatically from the logical and physical representations of the FIXM components.
- **FIXM Supporting Tools**: these are automation tools developed and used to support the development of the XML Schemas for FIXM Applications and FIXM Extensions.

For practical reasons, the evolution of FIXM will necessitate the update and recognition of these artefacts in a managed fashion by the use of recognised releases.

### 2.2.4 FIXM Extensions

FIXM, like AIXM and WXXM [9], shall support an extension mechanism, and should comply with the core and regional extension concept of ICAO Document 9965. Supporting extensions is paramount in order to:

- Enable Communities of Interest to capture application-specific requirements, without undermining global interoperability of flight information exchanges;
- Support the interface between implementers of different versions of FIXM;
- Facilitate the Change Management Process of FIXM.

**FIXM Extensions** shall supplement FIXM Core or FIXM Applications managed by the FIXM CCB in order to support additional (e.g. regional) requirements from particular communities of interest or organisations. An extension shall add elements beyond the provisions for FIXM Core or the FIXM Applications managed by the FIXM CCB, but shall never supersede them.

**FIXM Extensions** may serve as an operational “incubator” prior to being “promoted” to FIXM Core.

## 2.3 Catalogue of FIXM Applications and FIXM Extensions

FIXM Core and FIXM Applications are extensible by design. Therefore, extensions may be developed over time by third parties in order to satisfy domestic or regional needs. Likewise, new FIXM

Applications may be developed by third parties in order to address the use of FIXM Core - and possibly their extensions to FIXM Core - within their own application contexts.

These developments are good from a FIXM adoption perspective. However, they may lead to a proliferation of FIXM Applications and FIXM Extensions having possibly overlapping content or being incompatible<sup>1</sup>. This situation may undermine the global interoperability objectives for the Flight domain and may increase the cost of implementations for FIXM stakeholders being exposed to, and having to reconcile, a myriad of FIXM Extensions and FIXM Applications.

The FIXM CCB should support the identification of these issues and contribute to their resolution by building and maintaining a **catalogue of FIXM Applications and FIXM Extensions** developed by third parties, and by liaising with the appropriate stakeholders when potential synergies and collaboration opportunities are identified.

*Appendix B – Third-parties FIXM Applications and Extensions* provides additional considerations about this catalogue.

## 2.4 FIXM, one of many ATM standards

Many initiatives have been historically conducted by various ATM communities of interest in order to specify standards supporting the exchange of domain-specific information. ATM modernisation programmes are now moving towards integrated ATM information where these existing standards, developed to meet domain-specific requirements, have to be brought together and aligned to a certain extent.

FIXM, in this context, is one ATM standard, among many others, that will enable the exchange of elements of ATM information, restricted to the Flight domain. Its development shall therefore be aligned with other relevant ATM initiatives.

This chapter lists a number of strategic requirements for FIXM with regards to the alignment and connection with other ATM standard developments.

### 2.4.1 AIXM, WXXM and FIXM

The AIXM (Aeronautical Information Exchange Model) is designed to enable the management and distribution of AIS (Aeronautical Information Services) data in digital format. More information about this data exchange model can be found in the website [www.AIXM.aero](http://www.AIXM.aero).

The WXXM (Weather Information Exchange Model) is designed to enable a platform independent, harmonized and interoperable meteorological information exchange covering all the needs of the air transport industry. More information about this data exchange model can be found in the website [www.WXXM.aero](http://www.WXXM.aero).

FIXM (Flight Information Exchange Model) is designed to enable the interoperability of flight and flow information at a global level.

FIXM may overlap in scope with the AIM and MET domains. FIXM shall therefore be able to reference AIXM and WXXM when deemed relevant, and shall not redefine their content items<sup>2</sup>.

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<sup>1</sup> The qualifier “incompatible” is to be understood in a wide sense: incompatibility between a third party Extension/ Application and FIXM Core or the other FIXM components managed by the FIXM CCB, or incompatibility between FIXM extensions/applications developed by different third parties.

<sup>2</sup> FIXM, AIXM and WXXM need to be semantically consistent.

FIXM shall rely, as much as possible, on the same foundations as AIXM and WXXM, in order to allow greater interoperability between different ATM data domains. These common foundations may include:

- Standards from the ISO 19100 series;
- OGC standards and best practices.

#### 2.4.2 FIXM and AIDX

The International Air Transport Association (IATA) (<http://www.iata.org>) has established the Passenger and Airport Data Interchange Standards (PADIS) Board to develop Electronic Data Interchange message standards and also XML message standards for passenger travel and airport-related passenger service activities. One component of this project is AIDX, the Aviation Information Data Exchange, which is being used by ACI Airport Community Recommended Information Services (ACRIS) for Airport Collaborative Decision Making (A-CDM).

FIXM may capture pieces of flight information also captured in AIDX; therefore, FIXM shall be at least semantically consistent with AIDX, in case of an overlap of information.

#### 2.4.3 FIXM and the AIRM

ICAO endorsed during the 12<sup>th</sup> Air Navigation Conference the creation of an ATM Information Reference Model (AIRM) [12] acting as an overarching reference for the ATM domains: Flight, AIM, MET, Surveillance, etc.

As of May 2021, based on the work of the ICAO Information Management Panel (IMP), semantic interoperability of the information service payload is expected to be achieved by aligning the meaning of the information exchanged with the AIRM. The EUROCONTROL Specification on SWIM Information Definition [13] also requires the preservation of meaning of the AIRM concepts when describing exchanged ATM information (requirement SWIM-INFO-009).

It is recognised as a strategic objective for FIXM to establish the appropriate coordination and to gradually achieve semantic alignment with the AIRM. More generally, it is recognised as a strategic objective for FIXM to monitor the work and conclusions of the ICAO Information Management Panel (IMP) with regards to Information Management and SWIM and to align FIXM with any relevant recommendations from this panel, as appropriate.

## 2.5 FIXM Scope and Schedule

It is the role of the FIXM CCB to produce the FIXM Release Plan which:

- Provides the scope / content of FIXM;
- Details the FIXM implementation/evolution timelines;
- Balances expectations of system implementations.

The main intention is to achieve information exchange interoperability between stakeholders for all phases of flights and types of operations, but it does not preclude any beneficial usage within the stakeholders' environment. The expectations are that ICAO would look to focus on the global expectations whilst allowing more advanced regional developments.

The FF-ICE concept and the applicable ICAO provisions drive the common and international development of FIXM, and impose requirements on what FIXM will deliver. FIXM shall cover the ICAO requirements on FF-ICE information. The scope of FIXM can however go beyond the strict provisions for FF-ICE if approved by the FIXM change management.

The scope of an individual release of FIXM is decided by the FIXM CCB prior to the development, under the supervision of ICAO ATMRPP. The availability of operational inputs will drive the development of a given FIXM version. The FIXM CCB will provide the de facto focal point for collecting such operational

drivers, unless other working arrangements are approved by the FIXM CCB and duly described in the FIXM CCB charter.

### **3 FIXM Relationship to Services and Messages**

#### **3.1 Use of FIXM by Services**

FIXM, through the FIXM Applications, address how the flight data elements from FIXM Core can be packaged and used in terms of information service payload. Other service considerations are, strictly speaking, not within the formal scope of FIXM.

However, the supporting FIXM artefacts, and in particular the FIXM User Manual, may capture additional service-related considerations in order to help service implementers use FIXM in the context of their services. This technical guidance, if provided, should be released as informative guidance and shall not be prescriptive.

#### **3.2 FIXM Relationship to ATS Messages**

The FF-ICE/R1 Implementation Guidance Manual [14] chapter 3.6 explains that *for a significant period of time it will be necessary to operate within a “mixed mode” environment, i.e., one in which both current ATS messages and their associated procedures will apply in addition to FF-ICE messages and associated procedures*, and requires that FF-ICE messages can be mapped or translated to their ATS messages counterparts.

Therefore, FIXM shall ensure it retains and releases content that remains compatible with the ATS Messages and that enables the FF-ICE Messages to ATS Messages translation required by the FF-ICE Concept. The FIXM User Manual should provide guidance for realising this translation.

However, whilst needing to retain compatibility with the ATS Message content, FIXM shall ensure it is not constrained to just meeting such message-based needs and is thus also able to provide the additional and enhanced content needs for the evolving ATM needs, in line with ICAO requirements.

## 4 References

- [1] Global Air Traffic Management Operational Concept (First Edition - 2005), ICAO Doc 9854
- [2] Manual on Air Traffic Management System Requirements (First Edition – 2007), ICAO Doc 9882
- [3] Global Air Navigation Plan (Fourth Edition – 2013), ICAO Doc 9750
- [4] Manual on Global Performance of the Air Navigation System (First Edition – 2008), ICAO Doc 9883
- [5] Manual on Collaborative Air Traffic Flow Management (First Edition – 2012), ICAO Doc 9971
- [6] Manual on Flight and Flow Information for a Collaborative Environment (First Edition – 2012), ICAO Doc 9965
- [7] ASBU Working Document, (Edition 2, Version 3)
- [8] Procedures for Air Navigation Services: Air Traffic Management, ICAO Doc 4444, 15th Ed
- [9] Introduction to Aeronautical Information Exchange Model (AIXM) / Weather Information Exchange Model (WXXM) / FIXM Extensions, ICAO ATMRPP WP520
- [10] FIXM Change Management Charter, version 1.1
- [11] Manual On System Wide Information Management (SWIM) Concept, (Advanced Edition – 2015), ICAO Doc 10039
- [12] [ATM Information Reference Model](#)
- [13] [EUROCONTROL Specification on SWIM Information Definition](#)
- [14] [ICAO Doc 9965 Ed2 Volume II “FF-ICE/R1 Implementation Guidance Manual” v.0.95 \(draft\)](#)

## 5 Abbreviations

A-CDM	Airport Collaborative Decision Making
ACRIS	Airport Community Recommended Information Services
AIDX	Aviation Information Data Exchange
AIRM	ATM Information Reference Model
AIS	Aeronautical Information Services
AIXM	Aeronautical Information Exchange Model
ASBU	Aviation System Block Upgrade
ATMRPP	Air Traffic Management Requirements and Performance Panel
CCB	Change Control Board
FF-ICE	Flight and Flow – Information for a Collaborative Environment
FIXM	Flight Information Exchange Model
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IMP	Information Management Panel
ISO	International Standards Organisation
OGC	Open geospatial Consortium
PADIS	Passenger and Airport Data Interchange Standards
SWIM	System Wide Information Management
UML	Unified Modelling Language
WXXM	Weather Information Exchange Model
XML	Extensible Markup Language
XSD	XML Schema Definition

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## Appendix A – Eligibility criteria for FIXM Core

The flight information identified as globally applicable by ICAO FF-ICE [6] shall feed into FIXM Core, as stated in chapter 2.2.1. The criteria elaborated in this appendix clarify the expectations towards:

- Any ICAO FF-ICE regional requirements;
- Any ICAO requirements not originating from the ICAO ATMRPP;
- The requirements not originating from ICAO but from other community of interests.

### ICAO FF-ICE regional requirements

ICAO FF-ICE [6] specifies requirements for Flight and Flow Information exchanges. *Definitions of information elements for the FF-ICE are globally standardized.*

ICAO FF-ICE [6] states however that not all information elements may be applicable globally, and recognises that *Regional variation required for performance reasons will be implemented by use of different subsets of the standard information elements. New elements will be introduced regionally through regional extensions as needed but will not be mandatory for other regions, will not provide duplicate information of existing elements, and should be intended to become part of the global standard.*

ICAO FF-ICE [6] Figure 3-1 provides a graphical illustration of this environment.

### Other ICAO requirements

ICAO may develop additional concepts of operations that FIXM could support, such as the ICAO A-CDM concept whose development is underway.

Therefore, ICAO requirements not originating from the ICAO ATMRPP, but laid down by other ICAO panels, may be considered as drivers for FIXM.

### Other stakeholders' requirements

While ICAO FF-ICE provides the main driver for FIXM, some stakeholders may have additional Flight and Flow Information exchange requirements that could possibly be satisfied by FIXM. In other terms, non-ICAO requirements might be considered for FIXM.

Among these non-ICAO requirements, some may still prove to be globally applicable, while others may remain applicable to (a) specific region(s).

## Eligibility criteria for FIXM Core

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The following criteria are applicable for unambiguously deciding whether particular pieces of flight information qualify for FIXM Core.

- The ICAO FF-ICE Information Requirements applicable only at regional level<sup>3</sup> are not supported by FIXM Core.
- FIXM supports primarily the ICAO FF-ICE concept, but may satisfy other requirements laid down by other ICAO panels or groups.
- FIXM might support data items not stemming explicitly from ICAO requirements but whose global applicability can be demonstrated. These data items might for instance originate from third-parties FIXM Extensions, and could support future ICAO needs in the future.

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<sup>3</sup> Regional level means indifferently “one region” or “2 or more regions”.

This translates into the following table:

	ICAO						Non-ICAO		
	FF-ICE Information Requirements			Other Information Requirements			Non-ICAO Information Requirements		
	Global	Regional	Regional	Global	Regional	Regional	Global	Regional	Regional
		(1 region)	(2 or more regions)		(1 region)	(2 or more regions)		(1 region)	(2 or more regions)
<b>FIXM Core eligibility</b>	YES			YES			Limited		

The consequences of these criteria are the following:

- At the level of the FIXM change management,
  - The FIXM CCB should seek to engage with other ICAO panels that could possibly use FIXM as a technical solution in support of their concepts of operations.
  - As needed, the FIXM CCB will engage with ATMRPP in order to evaluate the global applicability of candidate “non-ICAO” flight data items proposed for FIXM Core. The evaluation will include the following:
    - Verification that the candidate flight data item has a name and a definition that is globally harmonised;
    - Verification that the usage of the candidate flight data item is justified by operational requirements that are globally applicable;
    - Verification that the candidate flight data does not conflict with other ICAO developments.
- At the technical level,
  - Flight data elements related to FF-ICE or other relevant requirements from ICAO are in FIXM Core scope.
  - Flight data elements not stemming from ICAO requirements but whose global applicability has been demonstrated may be considered in FIXM Core.
  - FIXM Extensions will be used for satisfying regional requirements (one region or 2 or more regions) and/or for capturing candidate flight data elements whose global applicability has not been demonstrated.

## Appendix B – Third-parties FIXM Applications and Extensions

As stated in chapter 2.3, the FIXM CCB should build, maintain and monitor a catalogue of known FIXM Applications and FIXM Extensions developed by third parties, so that potential synergies and collaboration opportunities across FIXM stakeholders can be identified. This is paramount to reduce the risk of incompatibilities between FIXM Core and third party FIXM Extensions, and between different third party FIXM Extensions or FIXM Applications.

Practically, the FIXM CCB should gradually record on the public FIXM website a list of known FIXM Applications and FIXM Extensions developed by third parties that support specific flight information exchanges with some ATM stakeholders. To do so, the FIXM CCB should invite third parties to inform the FIXM Community about their FIXM Applications and FIXM Extensions development plans, and should encourage and facilitate the publication of these materials with a wider FIXM audience, as appropriate. In particular, the FIXM CCB should enable third parties:

- To have their FIXM Applications and FIXM Extensions published directly on the public FIXM website. In this case, the public FIXM website would host these third party FIXM Applications and FIXM Extensions. This option may be typically chosen by FIXM stakeholders willing to publish their FIXM Applications and FIXM Extensions under BSD license.

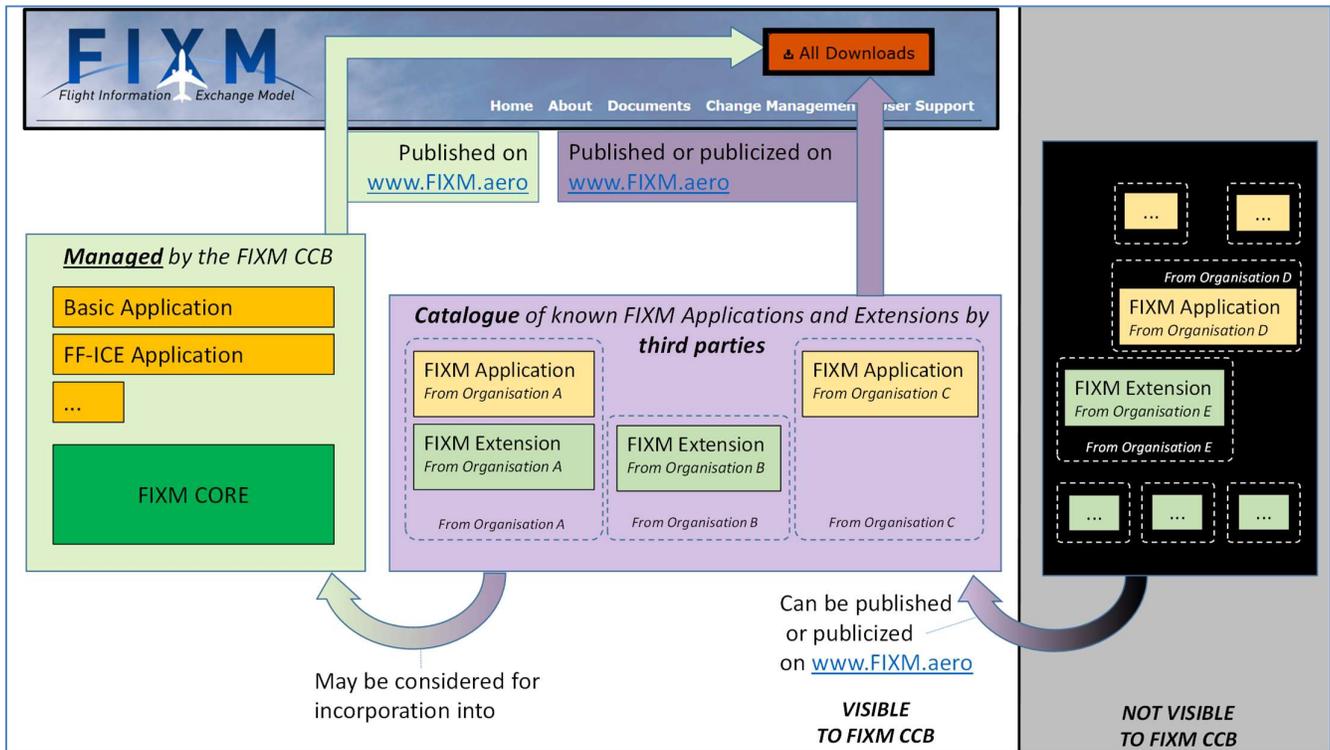
OR

- To have their FIXM Applications and FIXM Extensions publicized via the public FIXM website. In this case, the public FIXM website would only include a reference to the third party website hosting the FIXM Applications or FIXM Extensions. This option may be typically chosen by FIXM stakeholders willing to control the hosting of, and access to, their specific FIXM materials.

The FIXM CCB strongly recommends third parties to inform the FIXM CCB about their FIXM Applications and Extensions developments that support information exchanges with multiple ATM stakeholders. However, the FIXM CCB may remain unaware of particular FIXM implementation efforts, and some implementers may prefer not to advertise their FIXM work, in particular when FIXM Applications or Extensions are developed for internal use and are not exposed to other ATM stakeholders. Therefore, it is acknowledged that the catalogue of known FIXM Applications and FIXM Extensions may never be complete.

Content from the FIXM Applications or FIXM Extensions published on the public FIXM website may be considered for incorporation into the components managed by the FIXM CCB, in line with the criteria outlined in *Appendix A – Eligibility criteria for FIXM Core*. For instance, content that is incorporated as a FIXM Extension identified in the catalogue could be proposed to ICAO for formal inclusion in the ICAO requirements. If endorsed by ICAO, the data entity would move to the FIXM Core, so that traceability to ICAO requirements is retained for FIXM Core.

The picture below provides an illustration of the catalogue of third-parties FIXM Applications and Extensions.



*Note: as the catalogue of FIXM Applications and FIXM Extensions expands, the FIXM CCB may establish a formal verification process whereby the content of third-party components proposed for the catalogue would be more systematically analysed. This process would primarily aim to ensure appropriate awareness of the FIXM CCB about the detailed scope and content of the Applications and Extensions listed in the catalogue, to help identify commonalities and potential synergies, and to identify flight data elements that could become candidate for promotion to FIXM Core.*