ICAO CAPACITY & EFFICIENCY

AERONAUTICAL DATA CATALOGUE

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RO AIM - Oficina NACC OACI

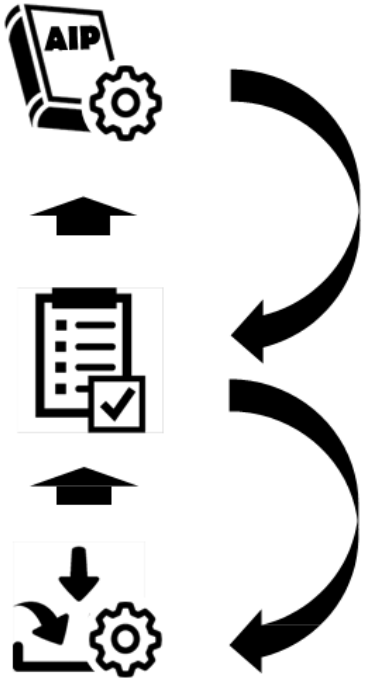
Mexico City, 3 to 5 September 2019

Adoption of Amendment 40

"This latest decision by the ICAO Council will now enable Global Air Transport Operations to complete the transition **from product-centric and paper-based AIS legacy processes**, to a **fully data-centric** AIM environment for Global Civil Aviation"

ICAO Council President Dr. Olumuyiwa Benard Aliu

The Product Centric Approach until Today



ICAO defined the **integrated Aeronautical Products**

The AISP kept a **list of data suppliers** to collect the required data for production

The data supplier **provided the requested data** to the AISP

State Letter: Identification & understanding what is really NEW is most important

International Civil Aviation Organization | Organisation de l'aviation civile internationale | Organización de Aviación Civil Internacional | Международная организация гражданской авиации | منظمة الطيران المدني الدولي | 国际民用航空组织

Tel.: +1 514-954-8219 ext. 5872

Ref.: AN 2/2.1.1-17/22 21 April 2017

Subject: Proposed amendment to Annex 15, new PANS-AIM and consequential amendments to Annexes 3, 4, 6, 9, 10, 11 and 14, PANS-ATM, PANS-OPS, PANS-ABC and PANS-Aerodromes

Action required: Comments to reach Montréal by 21 July 2017

Sir/Madam,

1. I have the honour to inform you that the Air Navigation Commission, at the sixth meeting of its 203rd Session held on 1 December 2016, conducted a preliminary review of the proposals developed by the Aeronautical Information Service (AIS) to Aeronautical Information Management (AIM) Study Group (AIS-AIMSG) for the amendment of Annex 15 — *Aeronautical Information Services*, the new *Procedures for Air Navigation Services — Aeronautical Information Management* (PANS-AIM) and consequential amendments to Annex 3 — *Meteorological Service for International Air Navigation*, Annex 4 — *Aeronautical Charts*, Annex 6 — *Operation of Aircraft*, Part I — *International Commercial Air Transport — Aeroplanes*, Annex 9 — *Facilitation*, Annex 10 — *Aeronautical Telecommunications*, Volume I — *Radio Navigation Aids* and Volume II — *Communication Procedures including those with PANS status*, Annex 11 — *Air Traffic Services*, Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations* and Volume II — *Heliports*, *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444), *Procedures for Air Navigation Services — Aircraft Operations*, Volume I — *Flight Procedures* and Volume II — *Construction of Visual and Instrument Flight Procedures* (PANS-OPS, Doc 8168), *Procedures for Air Navigation Services — ICAO Abbreviations and Codes* (PANS-ABC, Doc 8400) and *Procedures for Air Navigation Services — Aerodromes* (PANS-Aerodromes, Doc 9981). The Commission authorized the transmission of the proposals to Contracting States and appropriate international organizations for comments.

2. The background of the aforementioned proposals for the amendment is explained in Attachment A. The proposals for amendment of Annex 15, the new PANS-AIM and the consequential amendments to multiple Annexes and PANS are presented by subject in Attachments B to V. To facilitate your review of the proposed amendments, the rationales for the amendments have been provided in a text box immediately following each proposal. The aeronautical data catalogue, which forms part of

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AERONAUTICAL DATA REQUIREMENTS

4.1 Data Origination Requirements

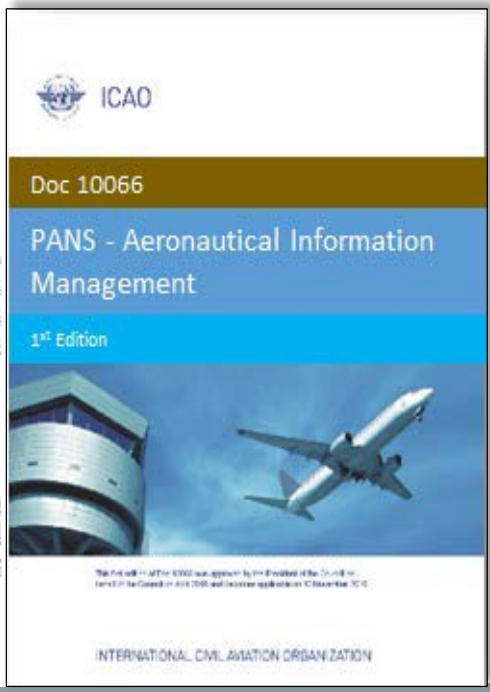
4.1.1 - New text

4.1.2 The order of accuracy for aeronautical data shall be as specified in Annex 11, Chapter 2, and Annex 14, Volumes I and II, Chapter 2. In that respect, three types of positional data shall be identified: surveyed points (runway thresholds, navigation aid positions, etc.), calculated points (mathematical calculations from the known surveyed points of points in space/fixes) and declared points (e.g. flight information region boundary points).

Editorial Note.— 4.1.2 is relocated text from Annex 15, 3.3.1

4.1.3 World Geodetic System — 1984 (WGS-84) shall be used as the horizontal (geodetic) reference system for international air navigation. Consequently, published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum.

Editorial Note.— 4.1.3 is relocated text from Annex 15, 1.2.1.1



Understanding the Data Centric Approach

Operational requirements are driving the need for aeronautical information products (including data sets)

States validate in terms of scope and DQR required **data being collected**

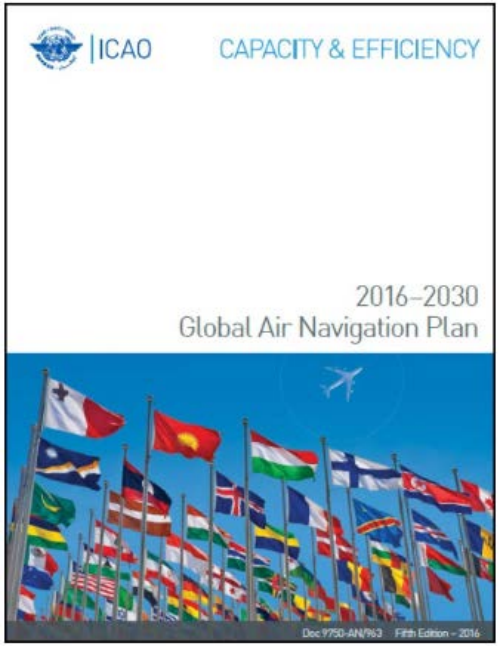
Required data **is described** in terms of scope, responsible source and DQR and **is delivered**

Procedures for Air Navigation Services Aeronautical Information Management (PANS-AIM, Doc. 10066)

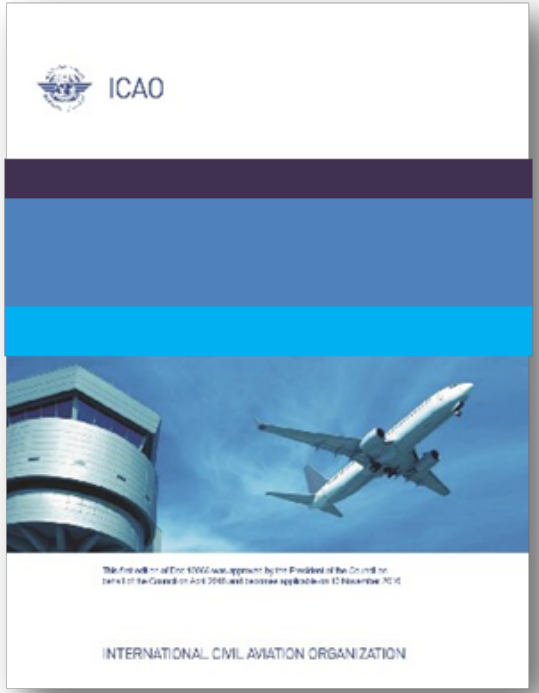
It is all about:

- GANP/ASBU support
- Priority no. 1 = PBN (RNP)
- CDO, CCO, AMAN/DEMAN
- Aircraft performance
- Noise reduction procedures

✓ **Therefore we need Digital AIM**



Implementing the Data-Centric Environment

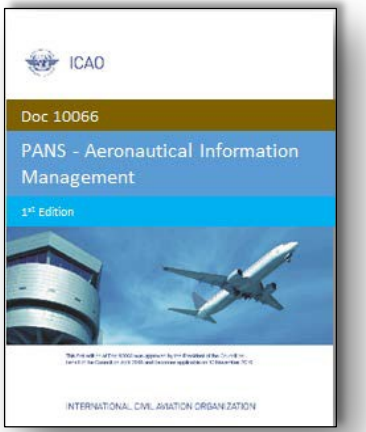


ICAO Annex 15 and PANS-AIM introduce the Aeronautical Data Catalogue, a **tool** in support of implementing the data-centric environment

- PANS-AIM -- Appendix 1 -- Table A1.1 Aerodrome.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.2 Airspace.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.3 ATS_Routes.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.4 IFP.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.5 Navaid.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.6 Obstacles.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.7 GeographicInformation.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.8 Terrain.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.9 Data type.xlsx
- PANS-AIM -- Appendix 1 -- Table A1.10 Other information.xlsx

Supports stepwise transition/migration

- Annex = performance based SARPs
- PANS = technical & procedural provisions
- Elevate certain procedures from guidance to PANS
- **Support data centricity** with processes & procedures
- Support interoperability
- PANS deviation to be published in AIP only
- Best practice example is PANS-ATM (Doc 4444) which exists since 1946 (Annex 2 & 11 contain no formats)



Implementation Steps at State Level

Annex 15 / PANS-AIM (including Data Catalogue)

State Regulatory Framework (Incl. allocation of cost)

Requirements Review

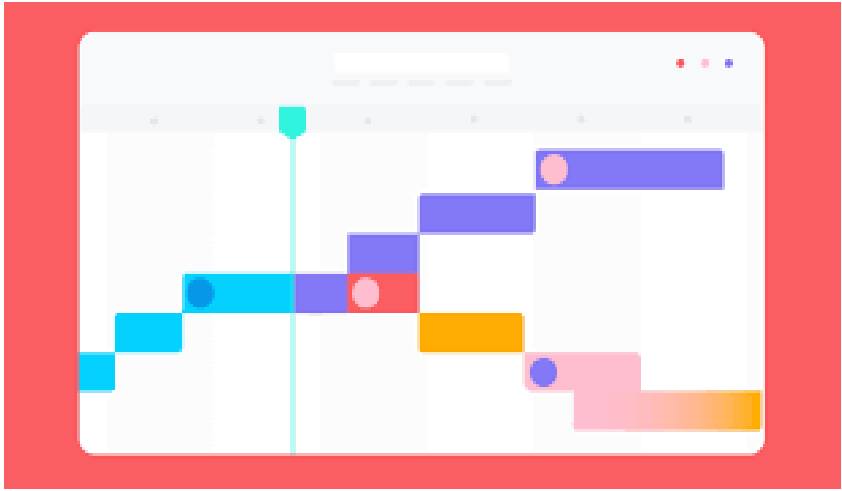
Update Data Catalogue (Scope and DQR)

Legal Applicability

Apply Data Catalogue

Timeline

- ✓ Initial ideas on AIS-AIMSG/3, Montreal, Nov 2010
- ✓ ANC on site, May 2011
- ✓ Ad hoc group PANS-AIM on AIS-AIMSG/4, Bordeaux, May 2011
- ✓ Data and information scope in AIS-AIMSG/7, Montreal, Jan 2014
- ✓ Since then involvement of IFPP/IWG
- ✓ Origination & Terminology on AIS-AIMSG/9, Tokyo, April 2014
- ✓ DQR on AIS-AIMSG/10, Montreal, Nov 2014
- ✓ Final on *AIS-AIMSG/12* in Oct 2015 …and more…

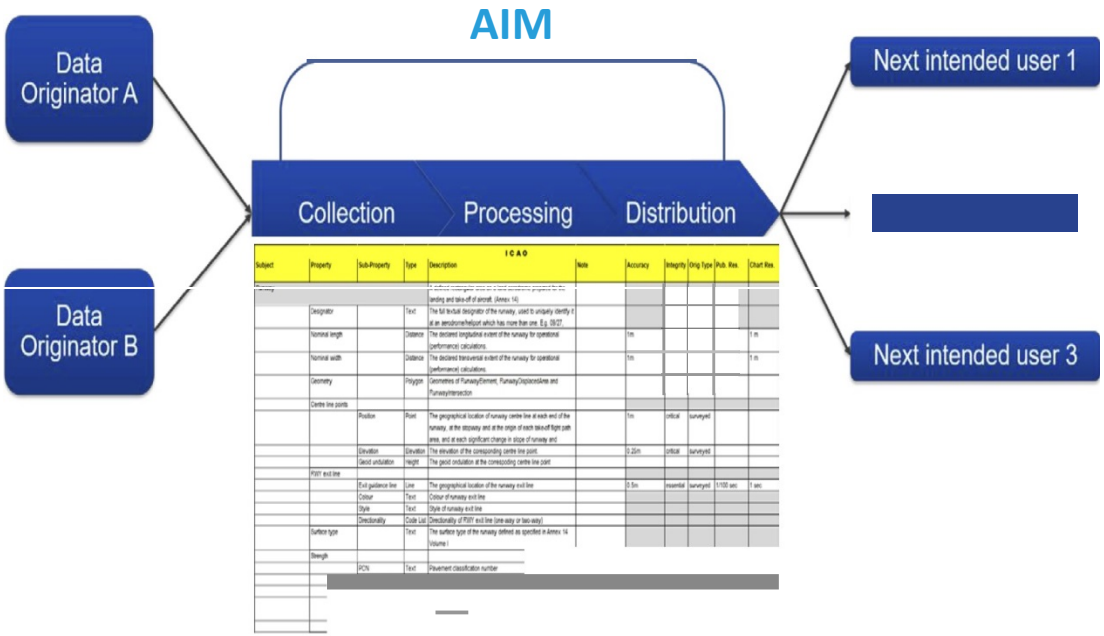


Focus on:

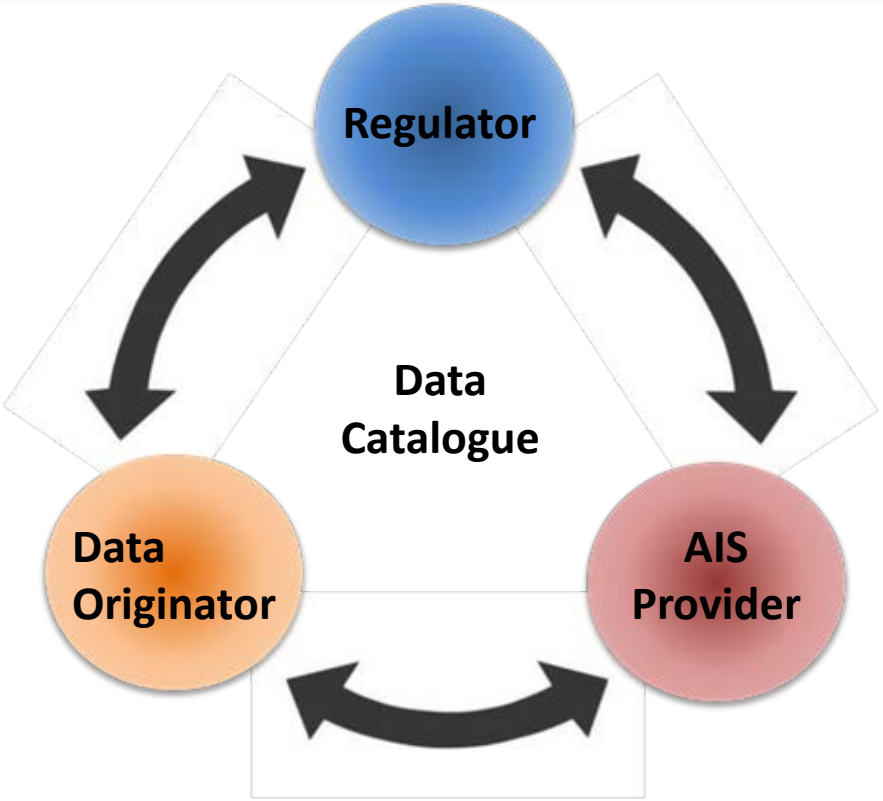
- ✓ Split of data origination from data publication requirements
- ✓ Introduction of the Aeronautical Data Catalogue
- ✓ Digital data sets
- ✓ Aeronautical information product (standard or electronic)
- ✓ Data quality requirements at one place (PANS-AIM)
- ✓ New terminology
- ✓ NOTAM improvement proposal
- ✓ CRC (Cycle redundancy Check) performance-based requirements

Data Catalogue: Topics

- What is the Data Catalogue?
  - Putting together the Data Catalogue
  - Elements of the Data Catalogue
  - Use of the Data Catalogue
- Data Originator Index
- Formal Arrangements
- Content of Products
- National Extensions



AIM Context



- Common language for the data centric environment
- Common defined AIM data scope
- Focus on data and data quality requirements

Focus: Data Catalogue

ICAO PANS-AIM
Aeronautical Data Catalogue

Table A 1-1 Aerodrome/Heliport data

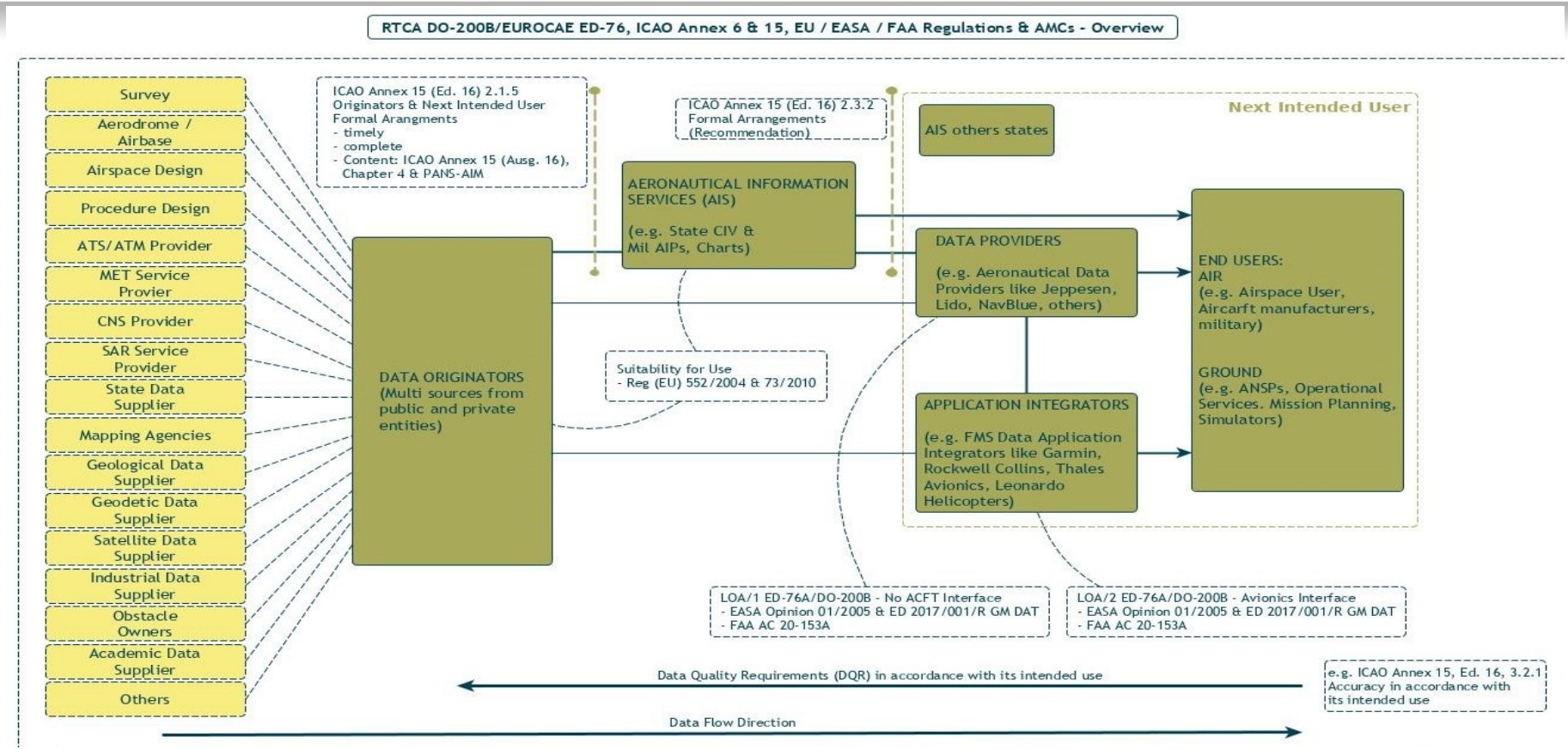
Subject	Property	Sub-Property	Type	Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
Runway				A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14)						
	Designator		Text	The full textual designator of the runway, used to uniquely identify it at an aerodrome/heliport. E.g. 09/27, 02R/20L, RWY 1.						
	Nominal length		Distance	The declared longitudinal extent of the runway for operational (performance) calculations.		1 m	critical	surveyed	1 m or 1 ft	1 m
	Nominal width		Distance	The declared transversal extent of the runway for operational (performance) calculations.		1 m	essential	surveyed	1 m or 1 ft	1 m
	Geometry		Polygon	Geometries of RunwayElement, RunwayDisplacedArea and RunwayIntersection						
	Centre line points									
		Position	Point	The geographical location of runway centre line at each end of the runway, at the stopway and at the origin of each take-off flight path area, and at each significant change in slope of runway and stopway	Definition from Annex 4 3.8.4.2	1 m	critical	surveyed		
		Elevation	Elevation	The elevation of the corresponding centre line point.		0.25 m	critical	surveyed		
		Geoid undulation	Height	The geoid undulation at the correspoding centre line point						
	RWY exit line									
		Exit guidance line	Line	The geographical location of the runway exit line		0.5 m	essential	surveyed	1/100 sec	1 sec
		Colour	Text	Colour of runway exit line						
		Style	Text	Style of runway exit line						
		Directionality	Code List	Directionality of RWY exit line (one-way or two-way)						
	Surface type		Text	The surface type of the runway defined as specified in Annex 14 Volume I						
	Strength									
		PCN	Text	Pavement classification number						
		Pavement type	Text	Pavement type for aircraft classification number — pavement classification number (ACN-PCN)						
		Subgrade category	Text	Subgrade strength category						

Aeronautical Data Catalogue

- The Aeronautical Data Catalogue presents the scope of data and information that can be collected and maintained by an AIS organization

- The Aeronautical Data Catalogue:
  - symbolizes the shift from product-centric to data centric environments,
  - is considered the point of reference for all provisions related to aeronautical data origination and publication and
  - represents the common language for data originators and AIS organizations

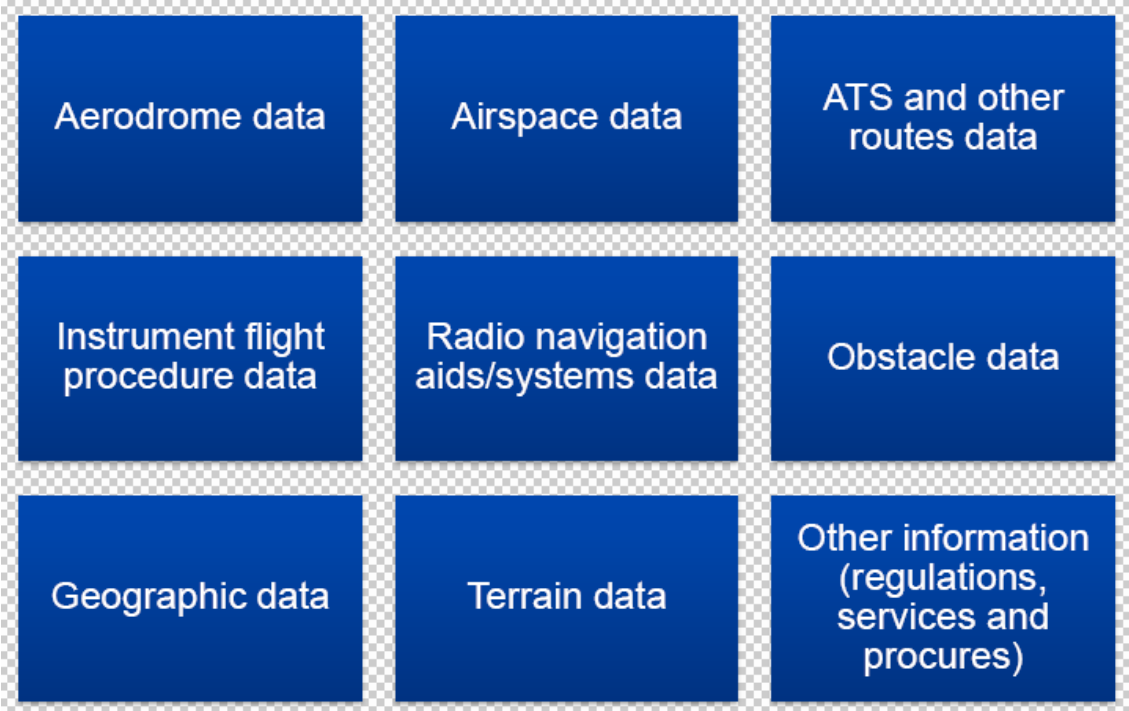
Focus: Processes & Data Chains



Data collected by AIS

- Aerodrome / Heliport
  - Name
  - Designator
  - Served City
- Runway
  - Designator
  - Nominal length
  - Nominal width
  - Strength
- Runway direction
  - Designator
  - True bearing
  - Threshold

Information Sub-Domains



Structure of each sub-domain

Subject	Property	Sub-Property
Runway		
	Designator	
	Nominal length	
	Nominal width	
	Geometry	
	Centre line points	
		Position
		Elevation
		Geoid undulation

Airport-Heliport | **Runway** | TLOF-FATO | Apron-Taxiway | Communication Facilities

- The classification of an element as Subject, Property or Sub-Property does not impose a certain data model
- Tabs provide easy access to the different subjects

Data types

Subject	Property	Sub-Property	Type
Runway			
	Designator		Text
	Nominal length		Distance
	Nominal width		Distance
	Geometry		Polygon
	Centre line points		
		Position	Point
		Elevation	Elevation
		Geoid undulation	Height

Table A1-9. Data types

Type	Description	Data elements
Point	A pair of coordinates (latitude and longitude) referenced to the mathematical reference ellipsoid which define the position of the point on the surface of the Earth.	Latitude Longitude Horizontal reference system Horizontal accuracy achieved
Line	Sequence of Points defining a linear object	Sequence of Points
Polygon	Sequence of Points forming the boundary of the polygon. The first and last Point are identical.	Closed sequence of Points

Description

Property	Sub-Property	Type	Description
			A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14)
Designator		Text	The full textual designator of the runway, used to uniquely identify it at an aerodrome/heliport. E.g. 09/27, 02R/20L, RWY 1.
Nominal length		Distance	The declared longitudinal extent of the runway for operational (performance) calculations.
Nominal width		Distance	The declared transversal extent of the runway for operational
Geometry		Polygon	Geometries of RunwayElement, RunwayDisplacedArea and
Centre line points			
	Position	Point	The geographical location of runway centre line at each end of the runway, at the stopway and at the origin of each take-off flight path area, and at each significant change in slope of runway and stopway
	Elevation	Elevation	The elevation of the corresponding centre line point.
	Geoid undulation	Height	The geoid undulation at the correspoding centre line point

Data Quality Requirements (DQR)

Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
1 m	critical	surveyed	1 m or 1 ft	1 m
1 m	essential	surveyed	1 m or 1 ft	1 m
1 m	critical	surveyed		
0.25 m	critical	surveyed		

- All DQR moved from Annexes 4, 11 14 and 15 to the Data Catalogue
- “Type” is now called “Origination Type”
- Shaded fields:
  - Text
  - Code lists

Originator Index

Table A1-10 Information about national and local regulation, services and procedures		Organization responsible for Origination
1	**National regulations and requirements**	
…		
1.3.	**Customs regulation and requirements**	Ministry of Finance
1.3.1.	Name, contact information and description of the customs authorities.	
1.3.2	Customs regulations and requirements concerning entry, transit and departure passengers and crew.	
1.3.3	Customs regulations and requirements concerning entry, transit and departure of cargo and other articles.	
1.4.	**Immigration regulation and requirements**	Ministry of Justice
1.4.1.	Name, contact information and description of the immigration authorities.	
1.4.2	Immigration regulations and requirements concerning entry, transit and departure passengers and crew.	
1.5.	**Health regulation and requirements**	Ministry of the Interior, Public Health Department
1.5.1.	Name, contact information and description of the health authorities.	
1.5.2	Regulations and requirements concerning public health measures applied to aircraft on entry, transit and departure on international flights.	
1.5.3	Public health regulations and requirements concerning entry, transit and departure passengers and crew.	
1.6.	**Agricultural quarantine regulation and requirements**	Ministry of Agriculture
1.6.1.	Name, contact information and description of the authorities concerned with agricultural quarantine.	
1.6.2	Agricultural quarantine regulations and requirements concerning entry transit and departure of cargo.	

List of Airport Data

Data to be originated by the airport is defined in Formal Arrangements:

ICAO										
Subject	**Property**	**Sub-Property**	**Type**	**Description**	**Note**	**Accuracy**	**Integrity**	**Orig Type**	**Pub. Res.**	**Chart Res.**
Runway				A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14)						
	Designator		Text	The full textual designator of the runway, used to uniquely identify it at an aerodrome/heliport which has more than one. E.g. 09/27,						
	Nominal length		Distance	The declared longitudinal extent of the runway for operational (performance) calculations.		1m	critical	surveyed	1 m or 1 ft	1 m
	Nominal width		Distance	The declared transversal extent of the runway for operational (performance) calculations.		1m	essential	surveyed	1 m or 1 ft	1 m
	Geometry		Polygon	Geometries of RunwayElement, RunwayDisplacedArea and RunwayIntersection						
	Centre line points									
		Position	Point	The geographical location of runway centre line at each end of the runway, at the stopway and at the origin of each take-off flight path area, and at each significant change in slope of runway and		1m	critical	surveyed		
		Elevation	Elevation	The elevation of the coresponding centre line point.		0.25m	critical	surveyed		
		Geoid undulation	Height	The geoid ondulation at the correspoding centre line point						
	RWY exit line									
		Exit guidance line	Line	The geographical location of the runway exit line		0.5m	essential	surveyed	1/100 sec	1 sec
		Colour	Text	Colour of runway exit line						
		Style	Text	Style of runway exit line						
		Directionality	Code List	Directionality of RWY exit line (one-way or two-way)						
	Surface type		Text	The surface type of the runway defined as specified in Annex 14 Volume I						
	Strength									
		PCN	Text	Pavement classification number						
		Pavement type	Text	Pavement type for ACN-PCN determination						
		Subgrade category	Text	Subgrade strength category						
		Allowable pressure	Text	Maximum allowable tire pressure category or maximum allowable tire pressure value						
		Evaluation method	Text	The evaluation method used						

Expand Code Lists

PANS-AIM: Valid codes for the code lists should be defined in the formal arrangements

Subject	Property	Sub-Property	Type
Aerodrome / Heliport			
	Designator		
		ICAO location indicator	Text
		Designator IATA	Text
		Other	Text
	Name		Text
	Served city		Text
	Type of traffic permitted		
		International_national	Code list
		IFR_VFR	Code list
		Sched_nonsched	Code list
		Civil_military	Code list
		Restricted_use	Text

("INTL","NTL","INTL-NTL")

("IFR","VFR","IFR-VFR","NIL")

("S","NS","S-NS")

("CIV","MIL","GA","CIVIL-MIL","CIV-GA","MIL-GA","CIV-MIL-GA")

AIP Data Set

The AIP data set shall include data about the following subjects, with the properties …

Subject	Property	Sub-Property	Type	ICAO Description	Note	Accuracy	Integrity	Orig Type	Pub. Res.	Chart Res.
Runway				A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft. (Annex 14)						
	Designator		Text	The full textual designator of the runway, used to uniquely identify it at an aerodrome/heliport which has more than one. E.g. 09/27,						
	Nominal length		Distance	The declared longitudinal extent of the runway for operational (performance) calculations.		1m	critical	surveyed	1 m or 1 ft	1 m
	Nominal width		Distance	The declared transversal extent of the runway for operational (performance) calculations.		1m	essential	surveyed	1 m or 1 ft	1 m
	Geometry		Polygon	Geometries of RunwayElement, RunwayDisplacedArea and RunwayIntersection						
	Centre line points									
		Position	Point	The geographical location of runway centre line at each end of the runway, at the stopway and at the origin of each take-off flight path area, and at each significant change in slope of runway and		1m	critical	surveyed		
		Elevation	Elevation	The elevation of the coresponding centre line point.		0.25m	critical	surveyed		
		Geoid undulation	Height	The geoid ondulation at the correspoding centre line point						
	RWY exit line									
		Exit guidance line	Line	The geographical location of the runway exit line		0.5m	essential	surveyed	1/100 sec	1 sec
		Colour	Text	Colour of runway exit line						
		Style	Text	Style of runway exit line						
		Directionality	Code List	Directionality of RWY exit line (one-way or two-way)						
	Surface type		Text	The surface type of the runway defined as specified in Annex 14 Volume I						
	Strength									
		PCN	Text	Pavement classification number						
		Pavement type	Text	Pavement type for ACN-PCN determination						
		Subgrade category	Text	Subgrade strength category						
		Allowable pressure	Text	Maximum allowable tire pressure category or maximum allowable tire pressure value						
		Evaluation method	Text	The evaluation method used						

Aerodrome/Heliport

- ICAO location indicator
- name
- designator IATA
- served city
- certified ICAO
- certification date
- certification expiration date
- control type
- field elevation
- reference temperature
- magnetic variation
- reference point

National Extensions

Example: Additional properties added for obstacles

	Marking		625	Text	Type of marking of obstacle	Annex 15 App 8 Table A8-4 Annex 14 2.5.5				
	Material		626	Text	Predominant surface material of the obstacle	AMDB				
	Operator / Owner		995	Text	Name and Contact information of obstacle operator or owner	AIS-AIM SG 12				
	Designation	Registration number	1061	Text	Registration number of obstacle in Swiss Obstacle Database	AIP, VFRM and WEGOM				
		NOTAM Nr	1062	Text	Nr of NOTAM the obstacle has first been published with	AIP, VFRM and WEGOM				
		Reference	1063	Text	Reference to aerodrome	AIP, VFRM and WEGOM				
		Runway / Area	1064	Text	Runway or AOC affected by obstacle	AIP, VFRM and WEGOM				
	Coord Swissgrid		1060	Point Line	Horizontal position of obstacle in Swiss Grid coordniate system (CH1903/LV03, EPSG 21781)	VFRM				
	Position Description		1067	Text	Description of the position of the obstacle relative to a map point or ARP	VFRM				

National Data Quality Requirements for IFR and VFR

Property	Sub-Property	ID	Type	Description	Note	Reference	Accuracy	Integrity	Origin type	Pub. Resolution	Chart Resolution	ADQ HL-	IFR Accuracy	IFR Integrity	VFR Accuracy	VFR Integrity	National Reference
Frequency		45	Value	Frequency of the station providing the service		AMDB											
Boundary		46	Polygon	Area boundary of the frequency area		AMDB											
Identifier		47	Text	The indentifier of the hot spot		AMDB											
Annotation		48	Text	Additional information about the hot spot		Annex 4 13.6 h)											
Geometry		49	Polygon	The geographical area of the hot spot		Annex 4 13.6 h) AMDB							5 m	routine	5 m	routine	VFR AD INFO chart
Designator		67	Text	The full textual designator of the runway, used to uniquely identify it at an aerodrome/heliport. E.g. 09/27, 02R/20L, RWY 1.		Annex 15 App 1 AD 2.12 1) Annex 14 I 2.5.1 a)											VFR AD INFO
Nominal length		68	Distance	The declared longitudinal extent of the runway for operational (performance) calculations.		Annex 15 App 1 AD 2.12 3) Annex 14 I 2.5.1 a)	1 m	critical	surveyed	1 m or 1 ft	1 m	LD005	1 m	critical	1 m	routine	VFR AD INFO
Nominal width		69	Distance	The declared transversal extent of the runway for operational (performance) calculations.		Annex 15 App 1 AD 2.12 3) Annex 14 I 2.5.1 a)	1 m	essential	surveyed	1 m or 1 ft	1 m	LD007	1 m	essential	1 m	routine	VFR AD INFO
Geometry		70	Polygon	Geometries of RunwayElement, RunwayDisplacedArea and RunwayIntersection		AMDB											
Centre line points	Position	108	Point	The geographical location of runway centre line at each end of the runway, at the stopway and at the origin of each take-off flight path area, and at each significant change in slope of runway and stopway	Definition from Annex 4 3.8.4.2	Annex 14 I App 5 A5-1 Annex 4 Ch 3 and 4, 5 AMDB	1 m	critical	surveyed			LL020	1 m	critical			
	Elevation	109	Elevation	The elevation of the corresponding centre line point. (See Annex 14 I 2.3.2: ---- for non-precision approaches ... any significant high and low intermediate points along the runway shall be measured to the accuracy of one-half metre or foot...)		Annex 4 I 2.3.2 Annex 14 I App 5 A5-2 Annex 4 Ch 3 and 4, 5 AMDB	0.25 m	critical	surveyed			EH013	0.25 m	critical			
	Geoid undulation	110	Height	The geoid undulation at the correspoding centre line point		AMDB											
RWY exit line	Exit guidance line	111	Line	The geographical location of the runway exit line		Annex 14 AMDB	0.5 m	essential	surveyed	1/100 sec	1 sec	LL025	0.5 m	essential			
	Colour	112	Text	Colour of runway exit line		AMDB											
	Style	113	Text	Style of runway exit line		AMDB											
	Directionality	114	Code List	Directionality of RWY exit line (one-way or two-way)		AMDB											
Surface type		73	Text	The surface type of the runway defined as specified in Annex 14 Volume I		Annex 15 App 1 AD 2.12 4) Annex 14 I 2.5.1 a)											VFR AD INFO
Strength	PCN	115	Text	Pavement classification number		Annex 14 I 2.6.2.a)											VFR AD
	Pavement type	116	Text	Pavement type for aircraft classification number — pavement classification number (ACN-PCN) determination		Annex 14 I 2.6.2 b)											VFR AD INFO
	Subgrade category	117	Text	Subgrade strength category		Annex 14 I 2.6.2 c)											VFR AD
	Allowable pressure	118	Text	Maximum allowable tire pressure category or maximum allowable tire pressure value		Annex 14 I 2.6.2 c)											VFR AD INFO
	Evaluation method	119	Text	The evaluation method used		Annex 14 I 2.6.2 c)											VFR AD
	MPW	1065	Value	Runway strength in MPW (maximum permissible weight) for asphalt and concrete runways		VFRM											VFR AD INFO
	MPA	1066	Value	Runway strength in MPA (Max. tire pressure) for grass runways		VFRM											VFR AD INFO
Strip	Length	120	Distance	The longitudinal extent of the runway strip.		Annex 15 App 1 AD 2.12 10) Annex 14 I 2.5.1 b)							1 m	routine			
	Width	121	Distance	The transversal extent of the runway strip		Annex 15 App 1 AD							1 m	routine			

State Level – Focus Areas

Focus on the **setup and relationships** with all parties in State including all data originators

Adapt the **States regulatory setup** to ensure readiness for the data centric environment

Use ICAO Data Catalogue as **baseline** for **structure and data elements**

Update Data Catalogue according States scope and DQR

State Level – Focus Area 1
States Regulatory Framework

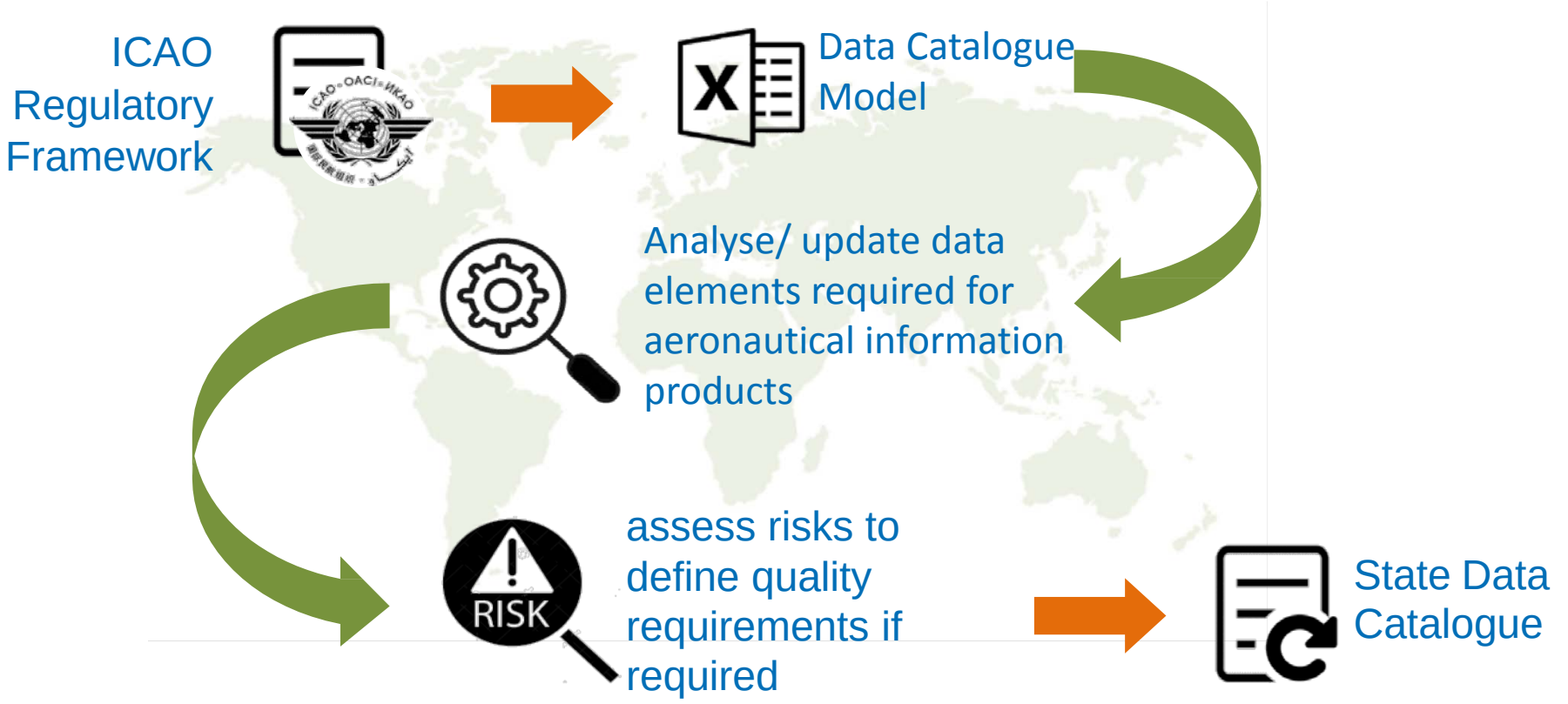
Define the **responsibilities and accountabilities** and implement the processes as legally required

Address cost allocation and cost recovery throughout full data chain

Oblige Parties to their duties in the data chain including all the Data Originators

Make **Data Catalogue legally applicable** including it’s change process

State Level – Focus Area 2
Update Data Catalogue (Scope and DQR)



Trends – AIM

- Data Centric Approach
- Data Sets instead of AIP pages
- Incentives for States
- 3 Types of Services
- Data Chain: Origination AIS Next Intended User
- New Annex 15 totally restructured
- New PANS-AIM / Data Catalogue
- 4 Volumes AIS Manual

Benefits

Ensures **foundation to a data-centric AIM**

Ensures **State data scope** by collecting all necessary data and quality requirements

Established regulatory framework with defined **responsibilities for originators, service providers and State authority** incl. **Cost allocation**

Facilitates communication between ICAO and the State as well as between the parties in the State

Harmonized data catalogue approach at global level to **enable data centric AIM and SWIM**

Supports **best practice**

Update Data Catalogue

States Prerequisites

- Include **VFR- and military data** to cover all State data elements
- Include **DQR for all data** including State required data (additional Data, DQR differences)
- Make **Data Catalogue assessable** for everyone (with exceptions of restricted military data)
- Enable a **full digital and quality assured** State aeronautical data chain

Summary

The Aeronautical Data Catalogue in PANS-AIM:

- Provides a description of aeronautical data defines the data quality requirements
- Consolidates the aeronautical data to be collected and maintained by an AIS
- Facilitates formal arrangements
- Enables national and regional extensions
- is not just an ICAO SARP, but a tool to ease your job

Don’t wait, get started and implement the data catalogue!

Your options …

- ✓ implement it yourself using the ICAO data catalogue model and go along best practice

or

- ✓ implement it with the help of an experienced craftsman using the ICAO data catalogue model

ICAO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Western and Central African (WACAF) Office Dakar
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THANK YOU