



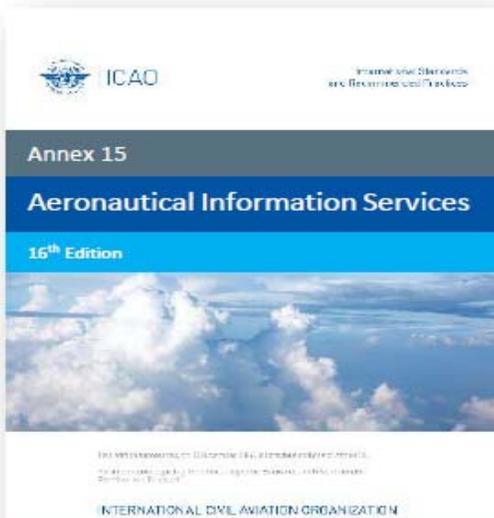
# **New ICAO Annex 15 and PANS-AIM from an Industry Perspective**

**MIDANPIRG AIM SG/5  
Cairo, 22-24 January, 2019**

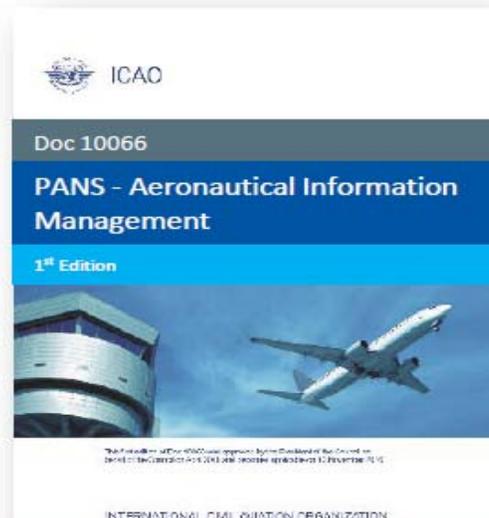
**Jonathan Tree  
Director, Industry Relations & Standards**



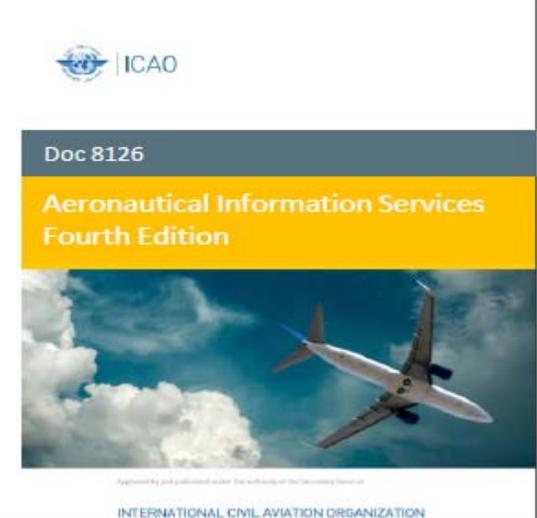
# ICAO AIM framework of documents



- Adopted by ICAO Council (Feb 2018)
- State Letter (April 2018)
- App. Date Nov 2018



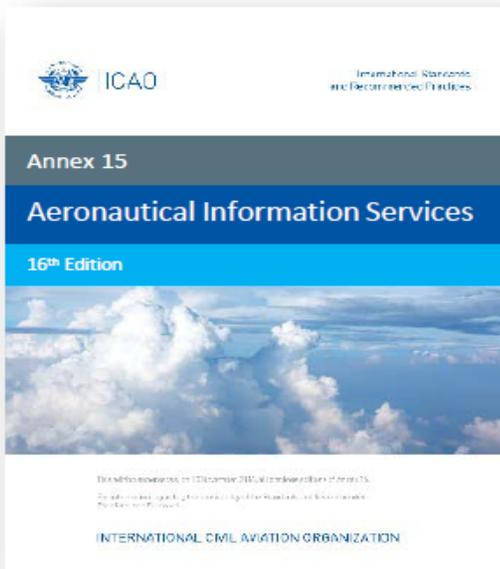
- To be approved by ICAO Council
- State Letter (Aug 2018)
- App. Date Nov 2018



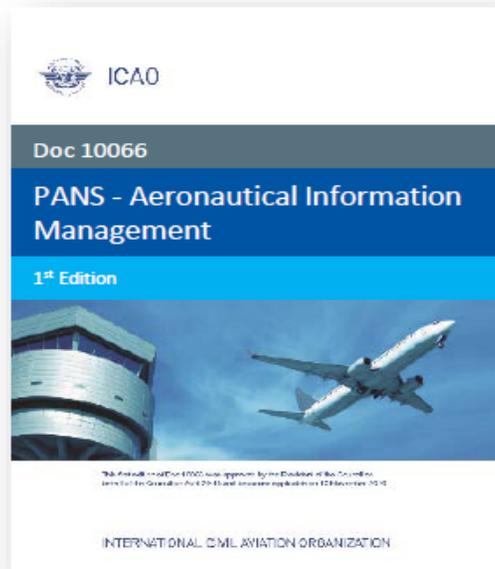
- Still Under work
- Ready by the applicability date (Nov 2018)



# ICAO AIM framework of documents



*What...*



*How...*



*Guidance...*

# AIRAC Adherence in New Annex 15

## 6.2 Aeronautical Information Regulation and Control (AIRAC)

6.2.3 ~~6.2.1~~ Information provided under the AIRAC system ~~in paper copy form~~ shall be distributed ~~made available~~ by the AIS unit ~~at least 42 days in advance of the effective date with the objective of reaching~~ so as to reach recipients at least 28 days in advance of the AIRAC effective date.

*Note. — AIRAC information is distributed by the AIS at least 42 days in advance of the AIRAC effective dates with the objective of reaching recipients at least 28 days in advance of the effective date.*

6.2.7 ~~6.2.2~~ **Recommendation.** — *Whenever major changes are planned and where advance notice is desirable and practicable, information ~~provided in paper copy form~~ should be distributed ~~made available~~ by the AIS ~~unit~~ so as to reach recipients at least 56 days in advance of the effective date. This should be applied to the establishment of, and premeditated major changes in, the circumstances listed in ~~Appendix 4, Part 3,~~ below, and other major changes if deemed necessary.*

# New Annex 15 – AIRAC Changes

## 6.2 Aeronautical Information Regulation and Control (AIRAC)

6.2.1 Information concerning the following circumstances shall be distributed under the regulated system (AIRAC) ...:

- a) Limits (horizontal and vertical), regulations and procedures applicable to:
  - 1) FIRs; 2) CTAs; 3) CTRs; 4) ADZs; 5) ATS Routes; 6) restrictive airspace ...
- c) Holding and approach procedures, arrival and departure procedures, noise abatement procedures and any other pertinent ATS procedures.
- d) Transition levels, transition altitudes and minimum sector altitudes.

6.2.3 Information provided under the AIRAC system shall be made available by the AIS so as to **reach recipients at least 28 days in advance** of the AIRAC effective date.

*Note. — AIRAC information is distributed by the AIS at least 42 days in advance of the AIRAC effective dates with the objective of reaching recipients at least 28 days in advance of the effective date.*

# New Annex 15 – Major AIRAC Changes

6.2.7 **Recommendation.**— Whenever **major changes** are planned and where advance notice is desirable and practicable, information should be made available by the AIS so as to **reach recipients at least 56 days in advance** of the effective date. This should be applied to the establishment of, and premeditated major changes in, the circumstances listed below, and other major changes if deemed necessary.

- a) **New aerodromes** for international IFR operations.
- b) **New runways** for IFR operations at international aerodromes.
- c) Design and structure of the **air traffic services route network**.
- d) Design and structure of a **set of terminal procedures** (including change of procedure bearings due to magnetic variation change).
- e) Circumstances listed in 6.2.1 if the **entire State** or any significant portion thereof is affected or if **cross-border coordination** is required.

*Note.* — Guidance material on what constitutes a major change is included in Doc 8126.

# New ICAO Doc 10066 (PANS-AIM)

## CHAPTER 6 - AERONAUTICAL INFORMATION UPDATES

### 6.1 Aeronautical Information Product updates

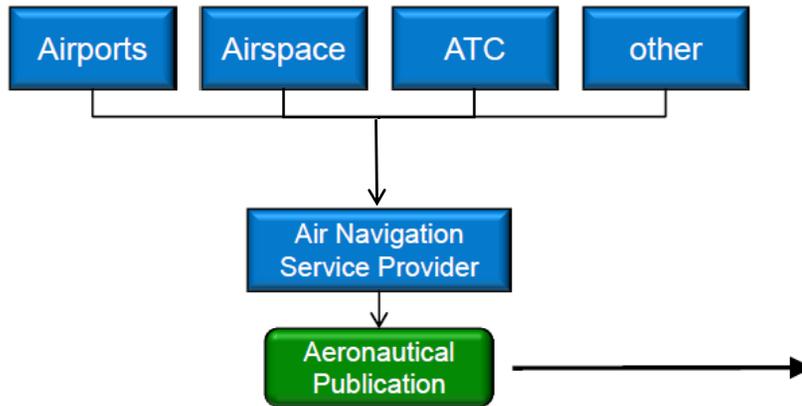
6.1.1 The same update cycle shall be applied to the AIP Amendments, the AIP data set and the Instrument Flight Procedures data set in order to ensure the coherence of the data items that appear in multiple Aeronautical Information Products.

# AIRAC Cycle and Industry Processing Timelines

AIRAC Cycle Number	ICAO Annex 15/PANS AIM			Jeppesen		Avionics	ICAO
	Major Changes (56 days in advance)	Normal Changes (42 days in advance)	Normal Changes to Reach Recipients (28 days in advance)	Processing of Nav Data Extract Begins	ARINC 424 Data Set Deliveries to OEMs Begin	OEM Database Deliveries to FMS Begin	AIRAC Effective Date
1901	8 Nov 18	22 Nov 18	<b>6 Dec 18</b>	14 Dec 18	17 Dec 18	20 Dec 18	<b>3 Jan 19</b>
1902	6 Dec 18	20 Dec 18	<b>3 Jan 19</b>	11 Jan 19	14 Jan 19	17 Jan 19	<b>31 Jan 19</b>
1903	3 Jan 19	17 Jan 19	<b>31 Jan 19</b>	8 Feb 19	11 Feb 19	14 Feb 19	<b>28 Feb 19</b>
1904	31 Jan 19	14 Feb 19	<b>28 Feb 19</b>	8 Mar 19	11 Mar 19	14 Mar 19	<b>28 Mar 19</b>
1905	28 Feb 19	14 Mar 19	<b>28 Mar 19</b>	5 Apr 19	8 Apr 19	11 Apr 19	<b>25 Apr 19</b>


# Standardizing Aeronautical Information



## New ICAO Annex 15

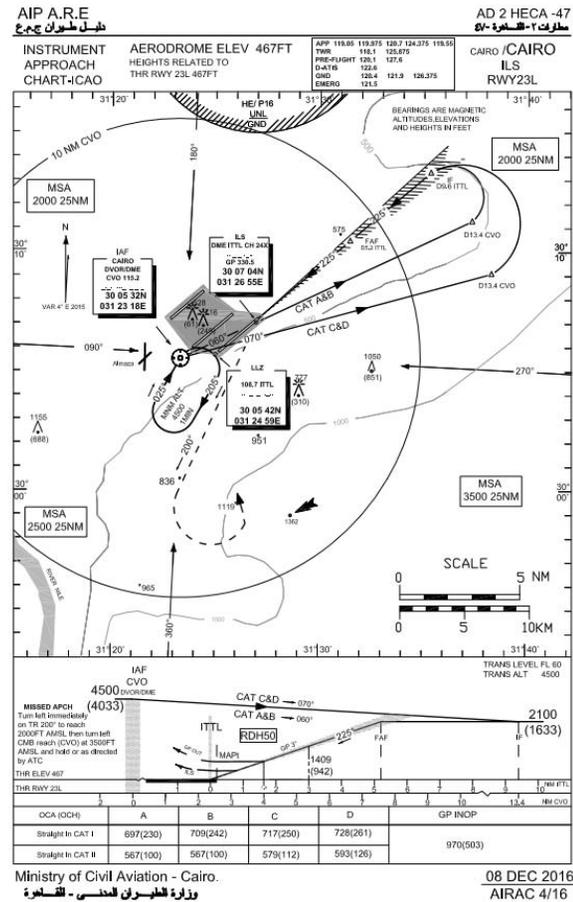
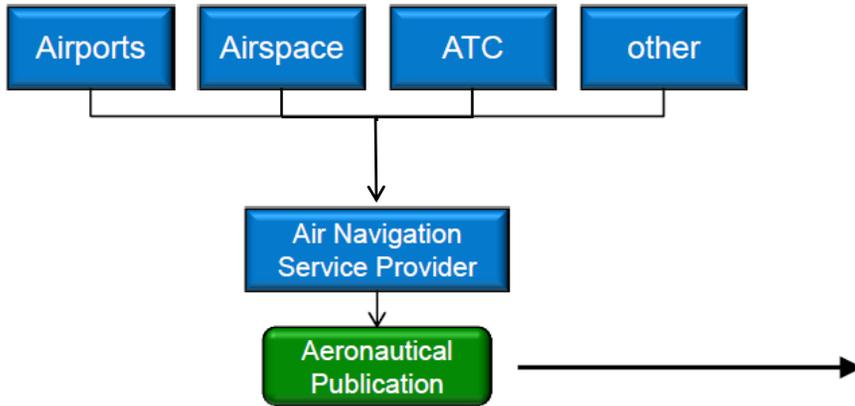
### 2.1 State responsibilities

2.1.1 Each Contracting State shall:  
provide an aeronautical information  
service (AIS) ...

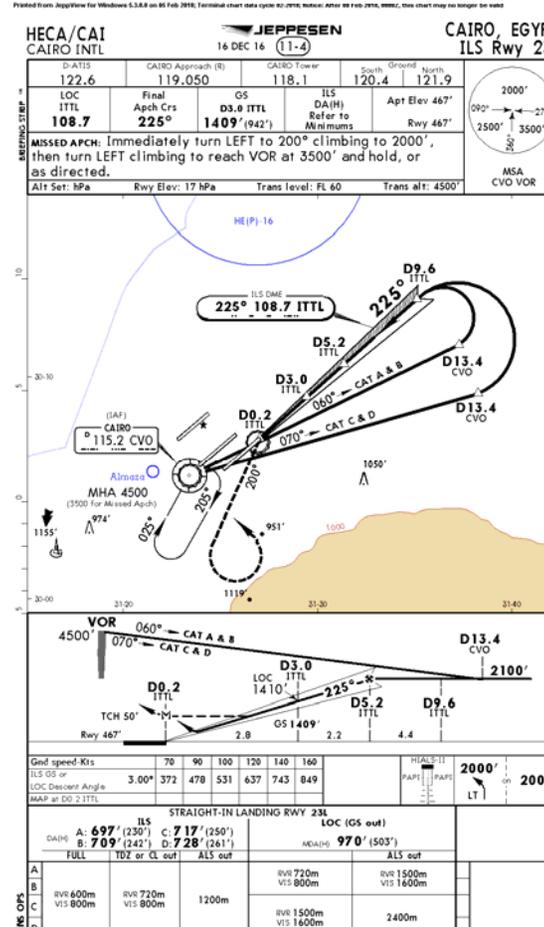
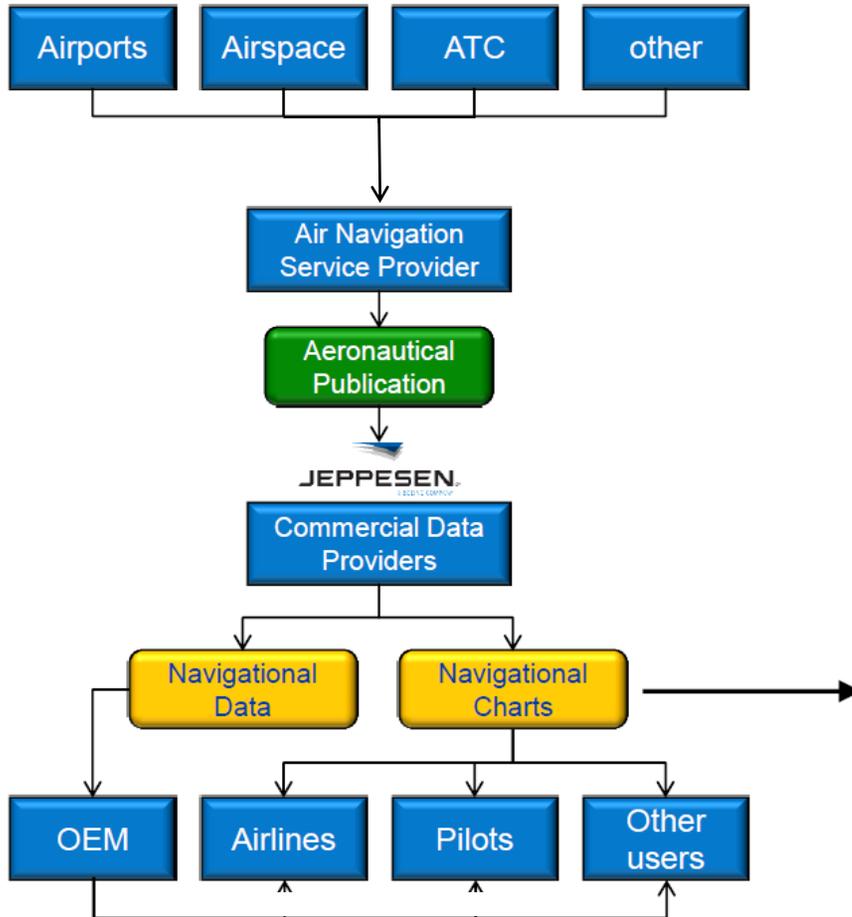
2.1.2 Each Contracting State shall  
ensure that the provision of aeronautical data  
and aeronautical information covers its own  
territory and those areas over the high seas for  
which it is responsible for the provision of air  
traffic services ...

2.1.4 Each Contracting State shall  
ensure that the aeronautical data and  
aeronautical information provided are  
complete, timely and of required quality ...

# Standardizing Aeronautical Information



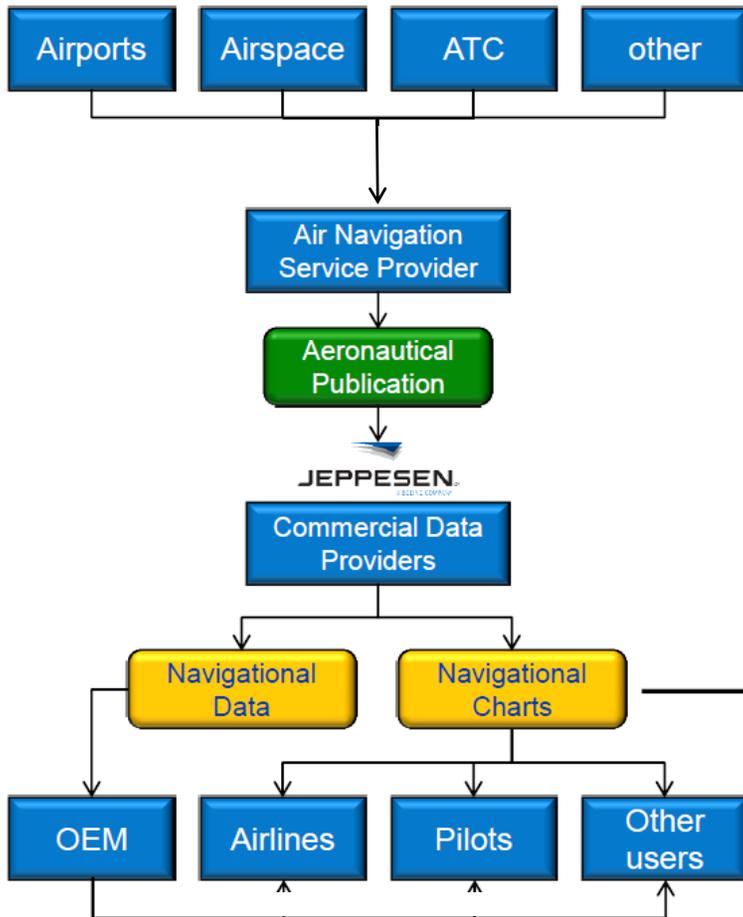
# Standardizing Aeronautical Information



# Jeppesen NavData



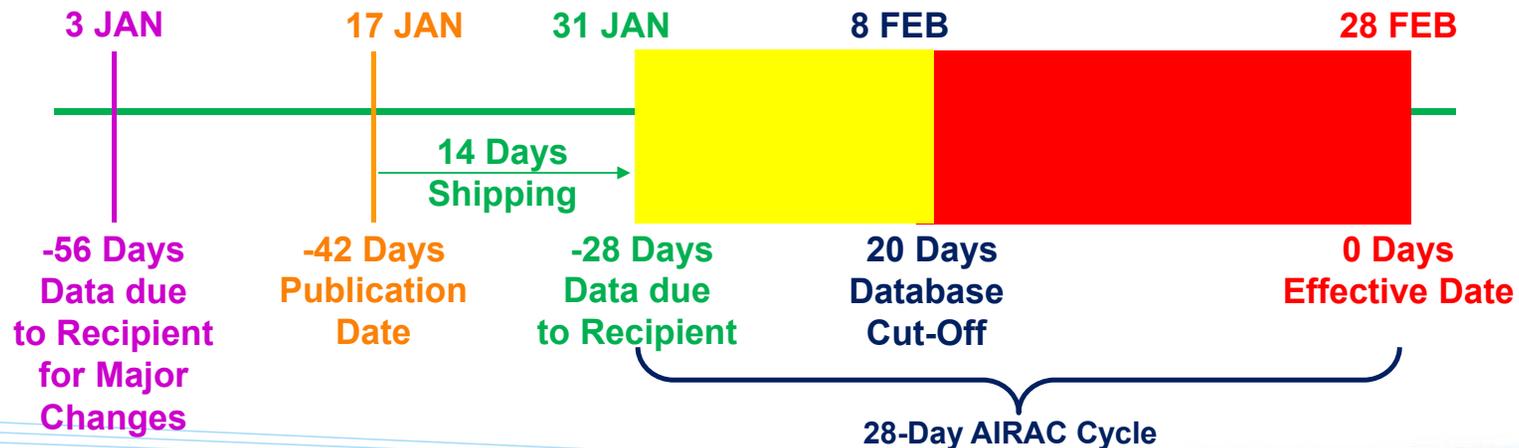
Boeing Commercial Airplanes / Flight Services | Jeppesen GmbH



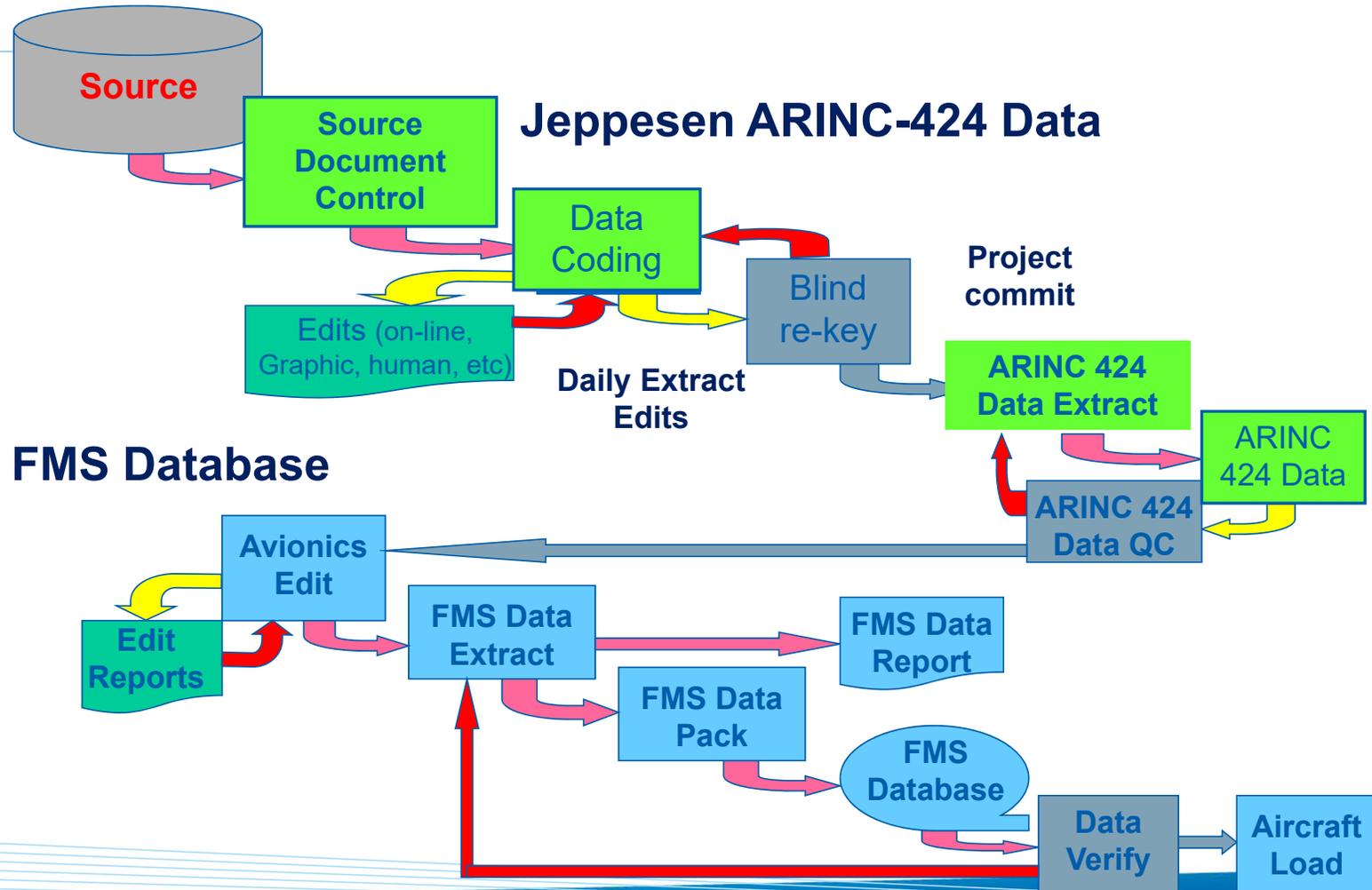
# Jeppesen Production Process in sync with ICAO Publication Dates according to Annex 15

## Jeppesen Navigation Database

- Updated every 28 days (AIRAC system)
- No updates outside AIRAC system
- A change may not be in the database at the effective date if
  - the effective date is outside the AIRAC system
  - source was received late
  - the ANSP is not responding to clarifications
- Cancellation of changes has to follow the AIRAC system as well
- Adherence to the AIRAC system should ensure that the change is in the database



# Downstream Data Process



# A Result of Late State Source



**!! URGENT !!**

**Date:** 8 September 2017

**Subject:**

**AIP SUP 37/17 (effective 14 SEP 17)**

*Charts not updated*

AIP SUP 37/17 (effective 14 Sep 17) was received after the date specified by ICAO for aeronautical information distribution. As a result, changes could not be processed for the 14 Sep 17 effective date. The charts will be updated as shown below:

SID charts 10-3/10-3A/10-3B/10-3C	Revision 15 Sep 17
Approach & Airport charts update	Revision 22 Sep 17

This Chart Alert is also posted on the Jeppesen Web site: [Notices and Alerts](#).

**WE STRONGLY URGE YOU TO MAKE THIS INFORMATION AVAILABLE**

# Worldwide Data Challenge

- **Very large and growing**
- **Increasing difficulty in managing with required quality**

	14,600 Airports
	89,200 Airport Details
	10,600 Airport Comms
	28,600 Navaids
	4,600 ILS Approaches
	6,300 VOR Approaches
	3,600 NDB Approaches
	7,100 RNAV Approaches
	17,500 Departures
	13,200 Arrivals
	72,000 Terminal Waypoints
	3,400 High Airways
	3,000 Low Airways
	2,800 High/Low Airways
	22,600 Enroute Waypoints

# Typical Aeronautical Data Problems

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- Late publication of information per AIRAC
- Late postponement of information per AIRAC
- AIRAC changes published in non-AIRAC amdt.
- Publications not received (numbers missing in sequence)
- Missing harmonization between adjacent states

## Industry Challenge – Volume & Timeliness of State Source Changes

### ■ **Statement of Issue**

- State publication of major and normal changes – either late or in a heavy volume – can overload industry capability to process and provide users with current procedures and aeronautical information

### ■ **Stakeholders**

- State AIM and ATM, Industry, Civil/Military Users

### ■ **Potential Solutions**

- AIRAC adherence and good communication and coordination

THANK YOU!

