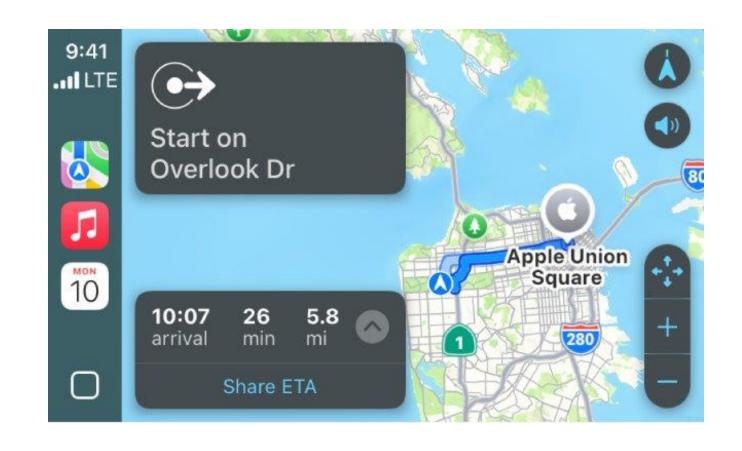
Replacing the NOTAM Concept

Progress update on NOTAM Replacement System and Key Principles
On behalf of the ICAO IMP/WG-A

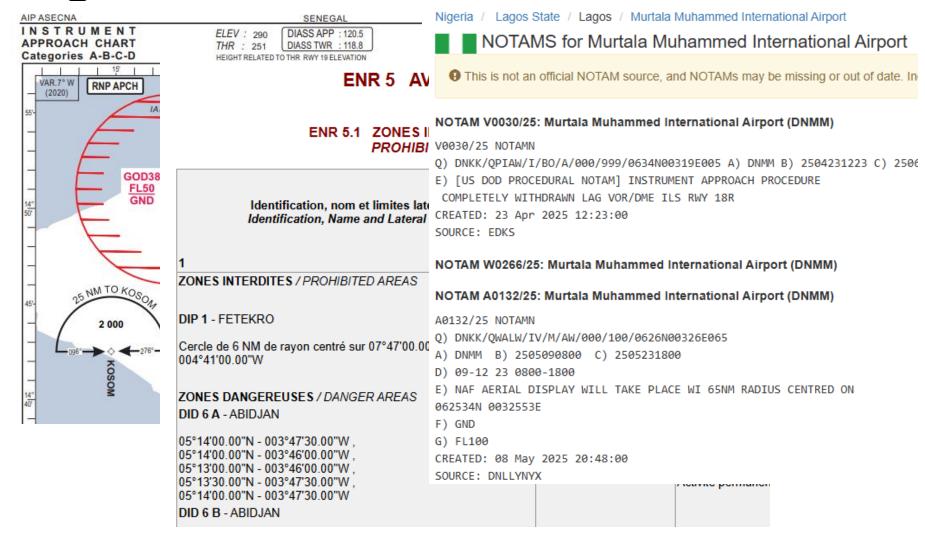
Why a New Concept?

Making Operational Decisions in real-time

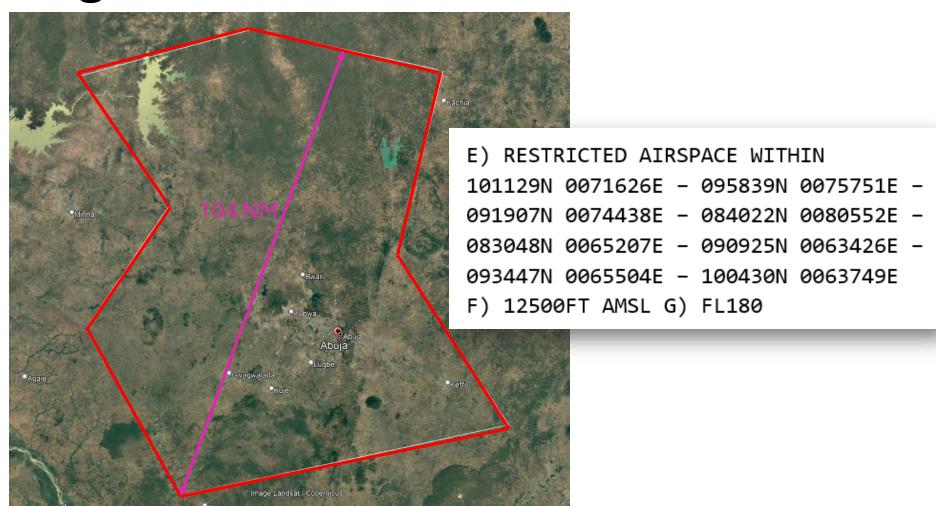
- Digital Data
- Multiple sources
- Integrated & presented to optimize situational awareness



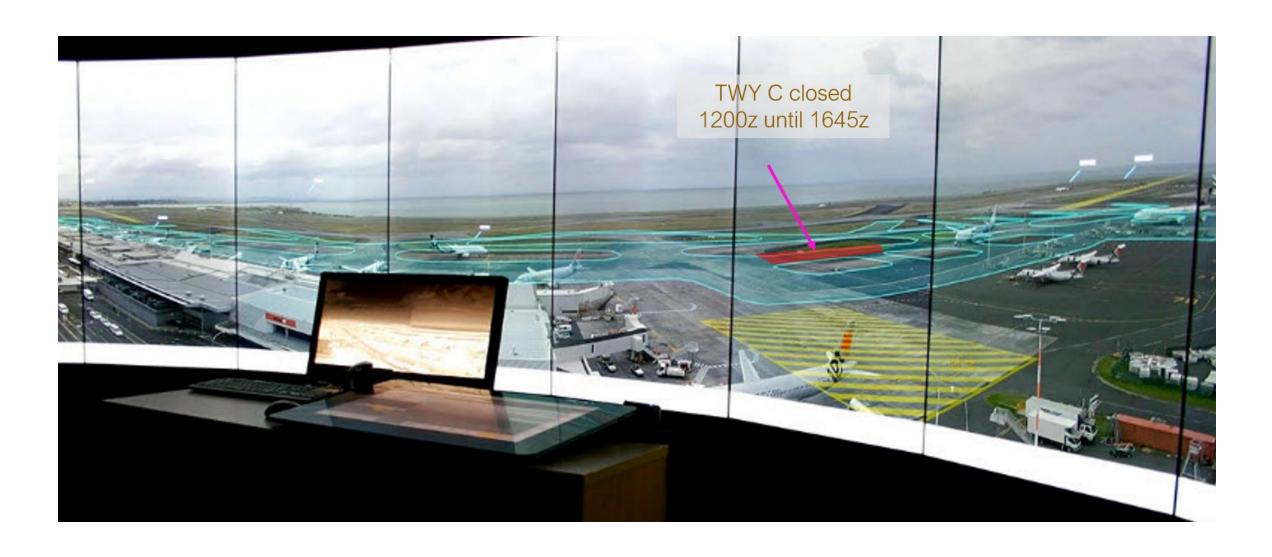
Making Decisions in real-time



Making Decisions in real-time



We need to get here!



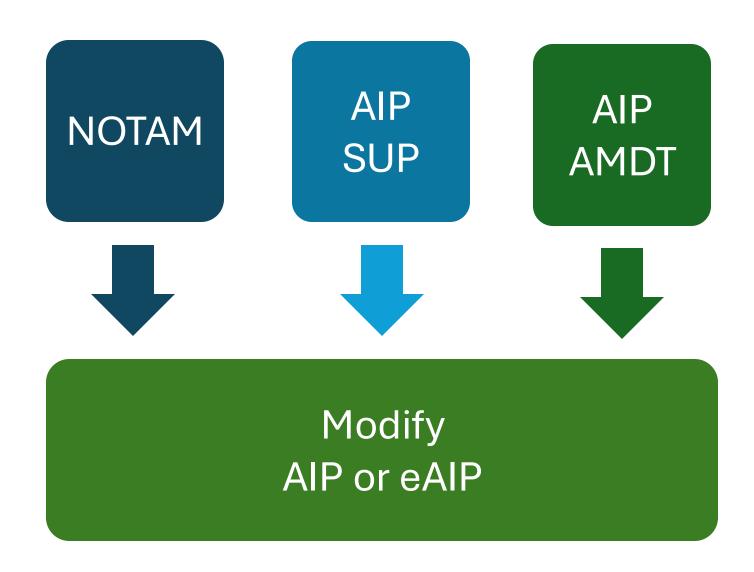
The Concept

Principles and what changes

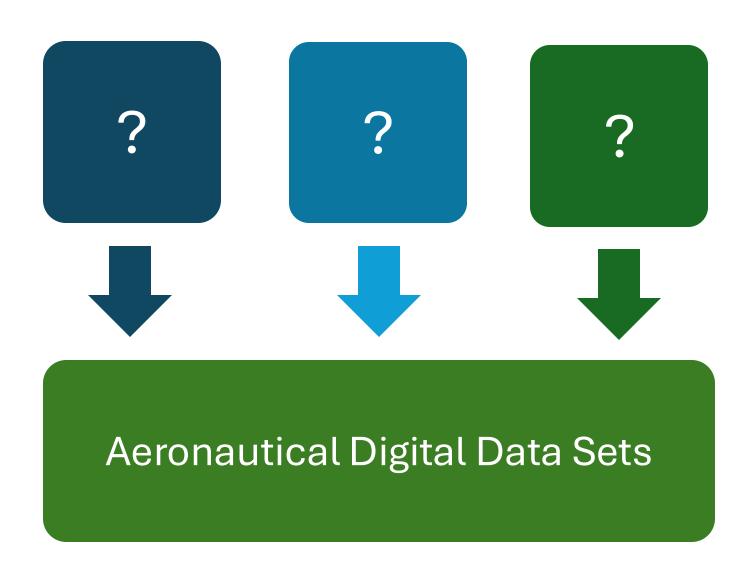
Aeronautical Digital Data Sets



Handling of Aeronautical Information



Handling of Aeronautical Data

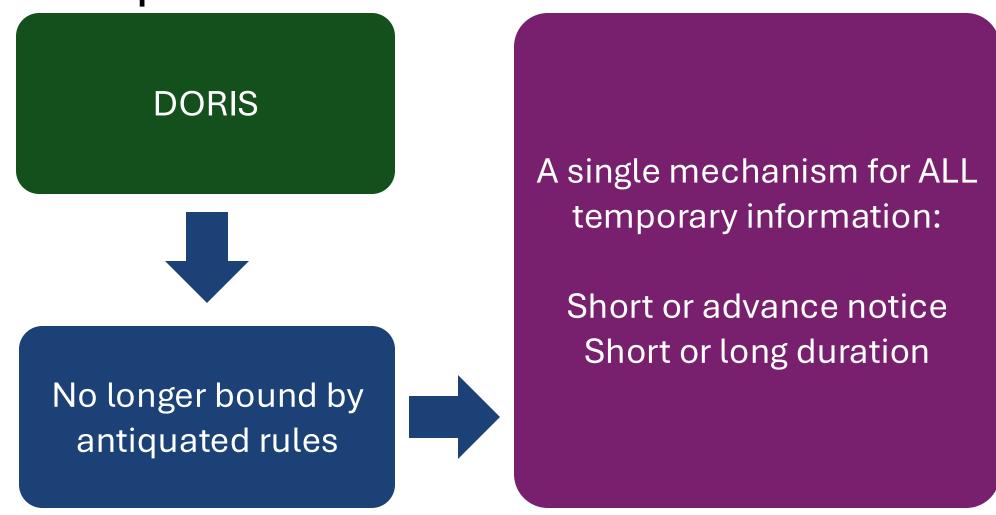


Is it Digital NOTAM?

Digital Operational Reporting Information Service "DORIS"

A small data set which temporarily complements the baseline data by changing a value, status or condition of an element of the baseline

Key Principles – How it works



Key Principle – Next intended User

```
E) RESTRICTED AIRSPACE WITHIN

101129N 0071626E - 095839N 0075751E -

091907N 0074438E - 084022N 0080552E -

083048N 0065207E - 090925N 0063426E -

093447N 0065504E - 100430N 0063749E

F) 12500FT AMSL G) FL180
```

```
<?xml version="1.0" encoding="utf-8" ?>
<aixm-message-5.1:AIXMBasicMessage xmlns:aixm-message
  xmlns:xsi='http://www.w3.org/2001/XMLSchema-ins
  xmlns:gml="http://www.opengis.net/gml/3.2" xsi:sche
  http://www.aixm.aero/schema/5.1/message/AIXM

    <aixm-message-5.1:hasMember>

  - <aixm-5.1:AirportHeliport gml:id='gmlAranID2" xmlns:aix
      <gml:identifier codeSpace='urn:uuid:">e1424c7e-58
    - <aixm-5.1: timeSlice>
     - <aixm-5.1:AirportHeliportTimeSlice gml:id='gmlAran'
       - <gml:validTime>
         - <gml:TimePeriod gml:id='gmlAranID4">
             <gml:beginPosition>2012-01-10T11:51:03Z
             <gml:endPosition />
           </gml:TimePeriod>
         </gml:validTime>
         <aixm-5.1:interpretation>BASELINE</aixm-5.1:int
         <aixm-5.1:sequenceNumber>1</aixm-5.1:sequence
         <aixm-5.1:correctionNumber>0</aixm-5.1:correcti
       - <aixm-5.1:featureLifetime>
         - <gml:TimePeriod gml:id='gmlAranID5">
             <gml:beginPosition>2012-01-10T11:51:03Z
             <qml:endPosition />
           </gml:TimePeriod>
         </aixm-5.1:featureLifetime>
         <aixm-5.1:designator>EVRA</aixm-5.1:designator
         <aixm-5.1:fieldElevation uom="FT">36</aixm-5.1:
         <aixm-5.1:magneticVariation>5</aixm-5.1:magnet
        - <aixm-5.1:servedCity>
         - <aixm-5.1:City gml:id="qmlAranID6">
```





Key Principle – End User

- <aixm-5.1:City gml:id="qmlAranID6">

```
<?xml version="1.0" encoding="utf-8" ?>
- <aixm-message-5.1:AIXMBasicMessage xmlns:aixm-message
   xmlns:xsi='http://www.w3.org/2001/XMLSchema-ins
   xmlns:gml="http://www.opengis.net/gml/3.2" xsi:sche
   http://www.aixm.aero/schema/5.1/message/AIXM
 - <aixm-message-5.1:hasMember>
  - <aixm-5.1:AirportHeliport gml:id='gmlAranID2" xmlns:ai:
      <gml:identifier codeSpace='urn:uuid:">e1424c7e-58
    - <aixm-5.1:timeSlice>
      - <aixm-5.1:AirportHeliportTimeSlice gml:id='gmlAran'</p>
        - <gml:validTime>
          - <gml:TimePeriod gml:id='gmlAranID4'>
              <gml:beginPosition>2012-01-10T11:51:03Z<</pre>
              <gml:endPosition />
            </gml:TimePeriod>
          </gml:validTime>
          <aixm-5.1:interpretation>BASELINE</aixm-5.1:int
          <aixm-5.1:sequenceNumber>1</aixm-5.1:sequence
          <aixm-5.1:correctionNumber>0</aixm-5.1:correcti

    - <aixm-5.1:featureLifetime>

          - <gml:TimePeriod gml:id='gmlAranID5'>
                                                                                                                                                              End
              <gml:beginPosition>2012-01-10T11:51:03Z
              <gml:endPosition />
            </gml:TimePeriod>
                                                                                                                                                           Users
          </aixm-5.1:featureLifetime>
          <aixm-5.1:designator>EVRA</aixm-5.1:designator
          <aixm-5.1:fieldElevation uom="FT">36</aixm-5.1:
          <aixm-5.1:magneticVariation>5</aixm-5.1:magnet
         - <aixm-5.1:servedCity>
```

The Next Intended User (systems) host the "code" to convert to portrayal and therefore can tailor to the End Users' needs.

Key Principle - Data vs Portrayal of Data Data Portrayal of Data

```
<?xml version="1.0" encoding="utf-8" ?>

    - <aixm-message-5.1:AIXMBasicMessage xmlns:aixm-message</li>

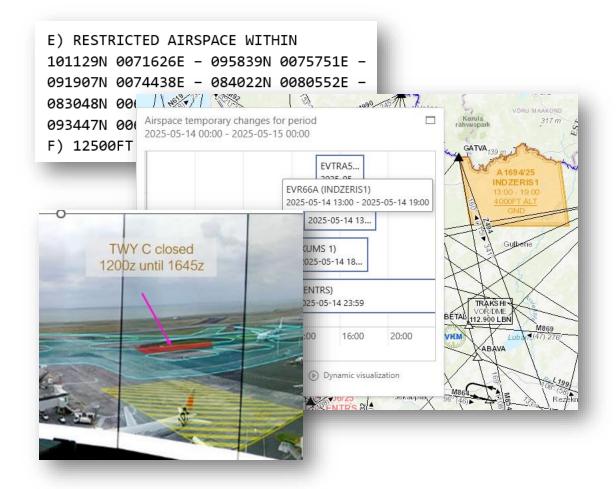
   xmlns:xsi='http://www.w3.org/2001/XMLSchema-ins
   xmlns:gml="http://www.opengis.net/gml/3.2" xsi:sche
   http://www.aixm.aero/schema/5.1/message/AIXM

    <aixm-message-5.1:hasMember>

   - <aixm-5.1:AirportHeliport gml:id='qmlAranID2' xmlns:aix
       <gml:identifier codeSpace='urn:uuid:">e1424c7e-58
     - <aixm-5.1:timeSlice>
      - <aixm-5.1:AirportHeliportTimeSlice gml:id='gmlAran'
         - <gml:validTime>
          - <gml:TimePeriod gml:id='gmlAranID4">
              <gml:beginPosition>2012-01-10T11:51:03Z
              <gml:endPosition />
             </gml:TimePeriod>
           <aixm-5.1:interpretation>BASELINE</aixm-5.1:int
           <aixm-5.1:sequenceNumber>1</aixm-5.1:sequence
           <aixm-5.1:correctionNumber>0</aixm-5.1:correcti

    - <aixm-5.1:featureLifetime>

           - <gml:TimePeriod gml:id='gmlAranID5'>
              <gml:beginPosition>2012-01-10T11:51:03Z
              <gml:endPosition />
             </gml:TimePeriod>
           </aixm-5.1:featureLifetime>
           <aixm-5.1:designator>EVRA</aixm-5.1:designator
           <aixm-5.1:fieldElevation uom="FT">36</aixm-5.1:
           <aixm-5.1:magneticVariation>5</aixm-5.1:magnet
         - <aixm-5.1:servedCity>
           - <aixm-5.1:City gml:id="gmlAranID6">
```



From Concept to Operations

Prerequisites and what it could look like from the point of view of originators and end users

Prerequisites to DORIS Implementation



Digital Data Sets (DDS)



DDS & DORIS coding specifications



Next Intended Users



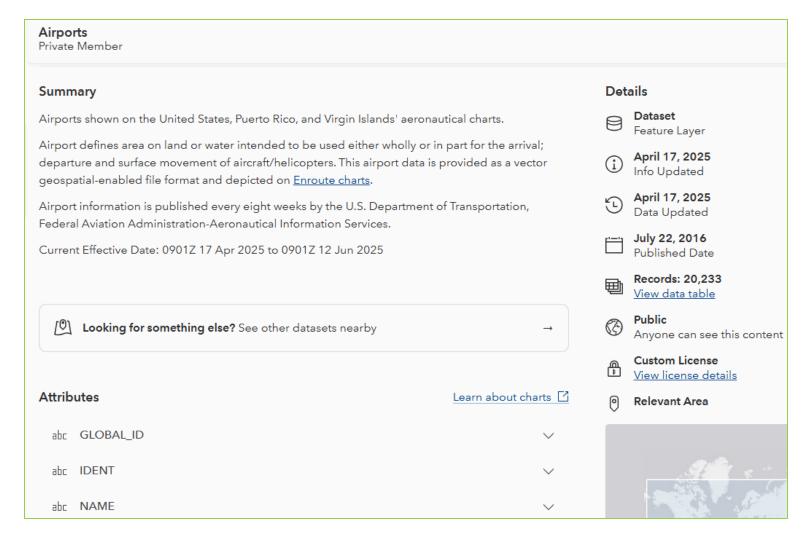
SWIM / Digital Data Services



Digital Data Viewers / Apps

Digital Data Services

- https://open.otta wa.ca/ (public library)
- https://addsfaa.opendata.arc gis.com/datasets/ faa::airports-1/about



Dependency on Technology & AIXM

DORIS Implementation cannot be achieved:

- Without technology
- Unless we have good quality digital data
- Unless we are interoperable (AIXM!!)
- Unless we work together and share knowledge

Skillsets, Tasks & Roles

How different will it be?

Roles, Skills and Tasks

- The roles will be the same or similar
- How the work is done will be different
- New work interfaces, less manual intervention, more monitoring
- Subject Matter Expertise focuses less on application of correct text, more on managing data
- Knowledge of data exchange principles

Communicating the Concept

Where information will be available

ICAO Website*



Progress Update

Work In Progress

- Publish the concept and populate website in Q3-Q4 2025
 - Material for sharing available
- Doc 8126 volume IV (4) expected in Q4 2025
- Work to amend the Annexes and PANS has started
- 2025 communication has started
- 2026-2028 workshops and info sessions

Key milestones

- November 2030: DORIS related SARPs Effective date.
- November 2030 onwards: States to undertake implementation steps.
- November 2032: DORIS related SARPs Applicability date.
- November TBD: Sunset date for NOTAM and AIP SUP

Key Takeaways

Key takeaways

Why change?

• Make better decisions in real-time, safer and efficient operations

What is DORIS?

- A small data set that modifies the baseline data
- Replaces NOTAM and AIP SUP

What is the next intended user?

• Technology Systems

What are prerequisites?

• DDS, SWIM, Receiving Systems ready, Coding specs, Data Viewers

Key takeaways

Where will we find information?

• ICAO Website > Aeronautical Information Management

Will the way we do the work change?

- Roles will remain, but how the work is done will change
- New knowledge, but no need to be a coding expert!

When will NOTAM / AIP SUP be discontinued?

TBD (but it will happen)

Thank You