

EAD Preparation - AMDT 40 Annex 15 and PANS-AIM

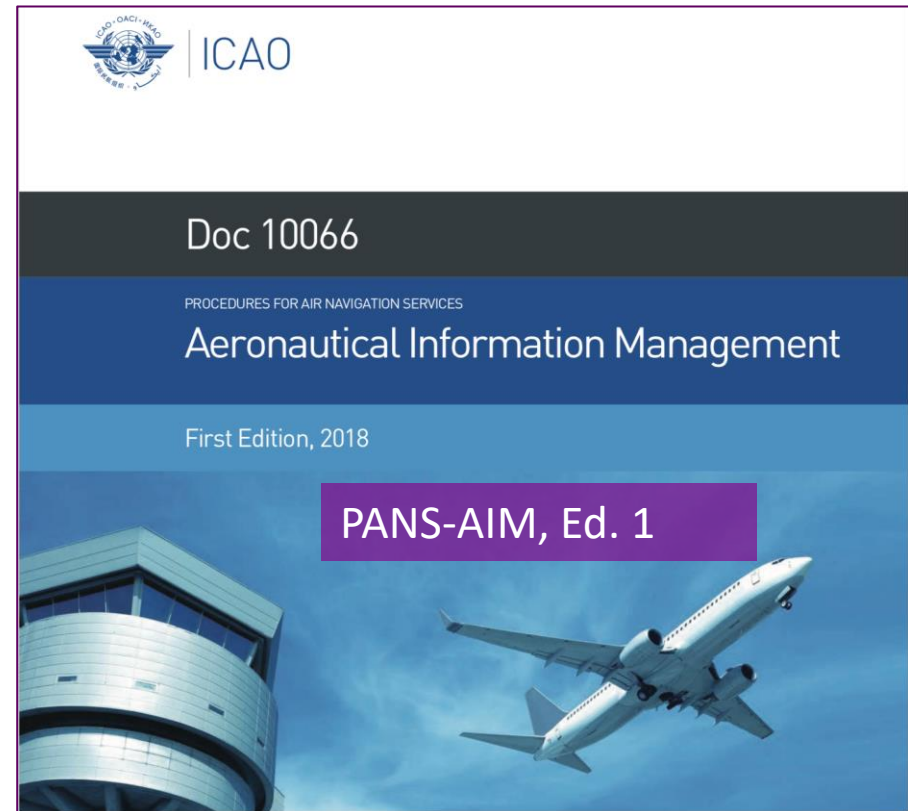
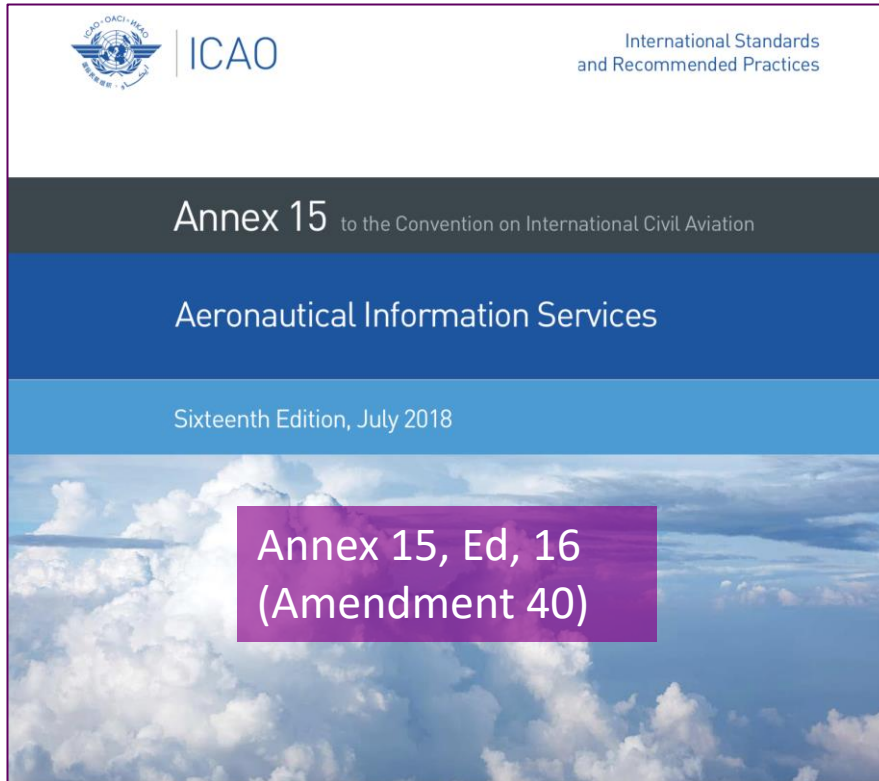
GroupEAD Scope and Approach,
Mexico Sep-19, Rev. 01.00

Content











- ICAO Data Sets
 - Context
 - Scope
 - European Survey Results about the Data Sets implementation
- AIP Data Set
 - Scope
 - Impact in EAD
 - Data Format
 - Metadata
 - Temporality / Validity
 - Validation
 - Storage and Provision
 - Service
 - Implementation

ICAO DATA SETS

ICAO Data Sets - Context



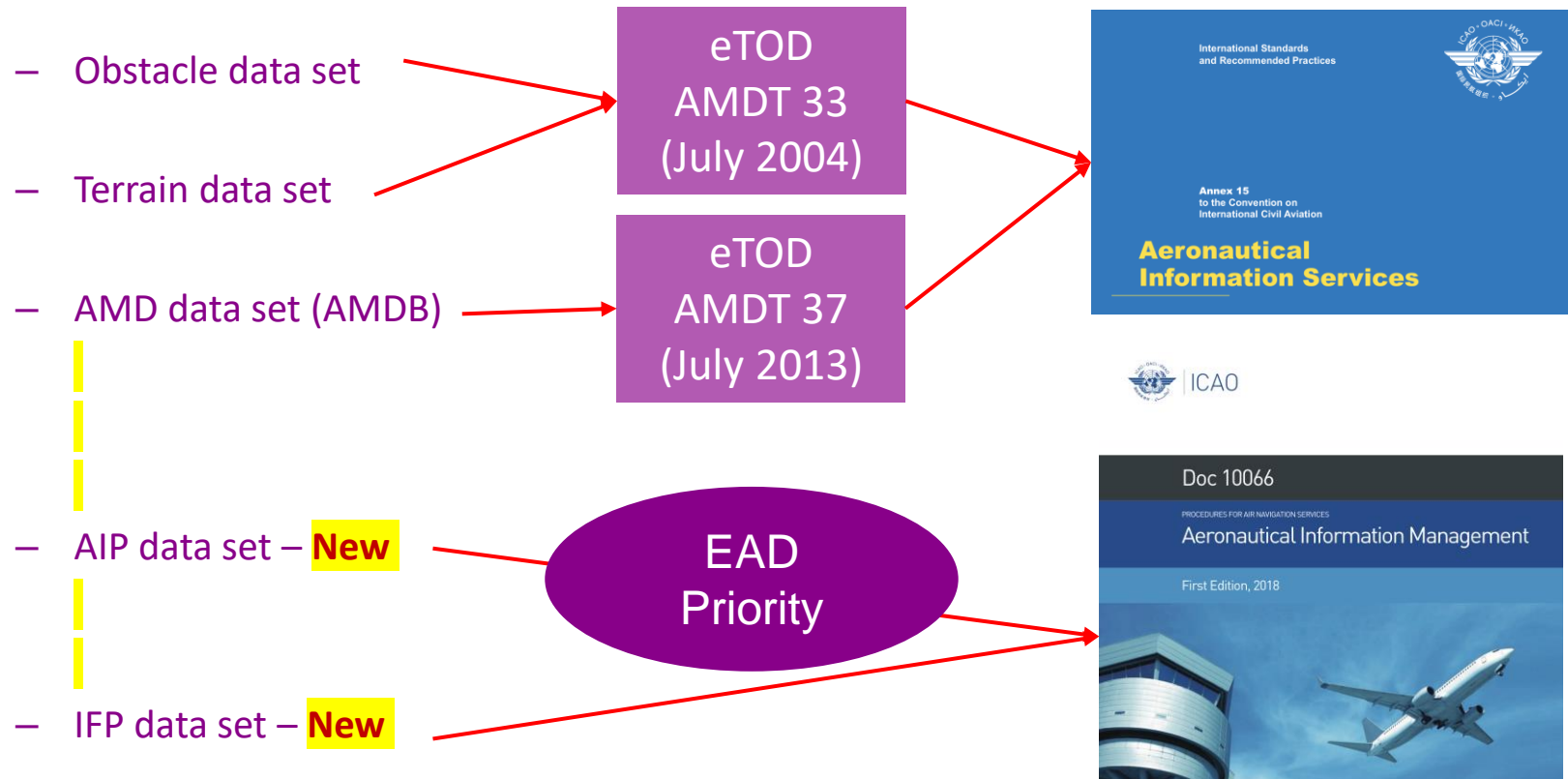
ICAO Data Sets - Context

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 DOC_10066_Ed1_APP_EN-EDENPROD-#760479-v1.XLSX	RTE/DPN
 DOC_10066_Ed1_APP_EN-EDENPROD-#760480-v1.XLSX	Proc.
 DOC_10066_Ed1_APP_EN-EDENPROD-#760481-v1.XLSX	Navaid
 DOC_10066_Ed1_APP_EN-EDENPROD-#760482-v1.XLSX	OBS
 DOC_10066_Ed1_APP_EN-EDENPROD-#760483-v1.XLSX	AMDB
 DOC_10066_Ed1_APP_EN-EDENPROD-#760484-v1.XLSX	Terrain
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 DOC_10066_Ed1_INP_EN-EDENPROD-#760486-v1.XLSX	Reg.

PANS-AIM, Appendix 1 –
Aeronautical Data Catalogue

ICAO Data Sets - Scope

- 5 data sets

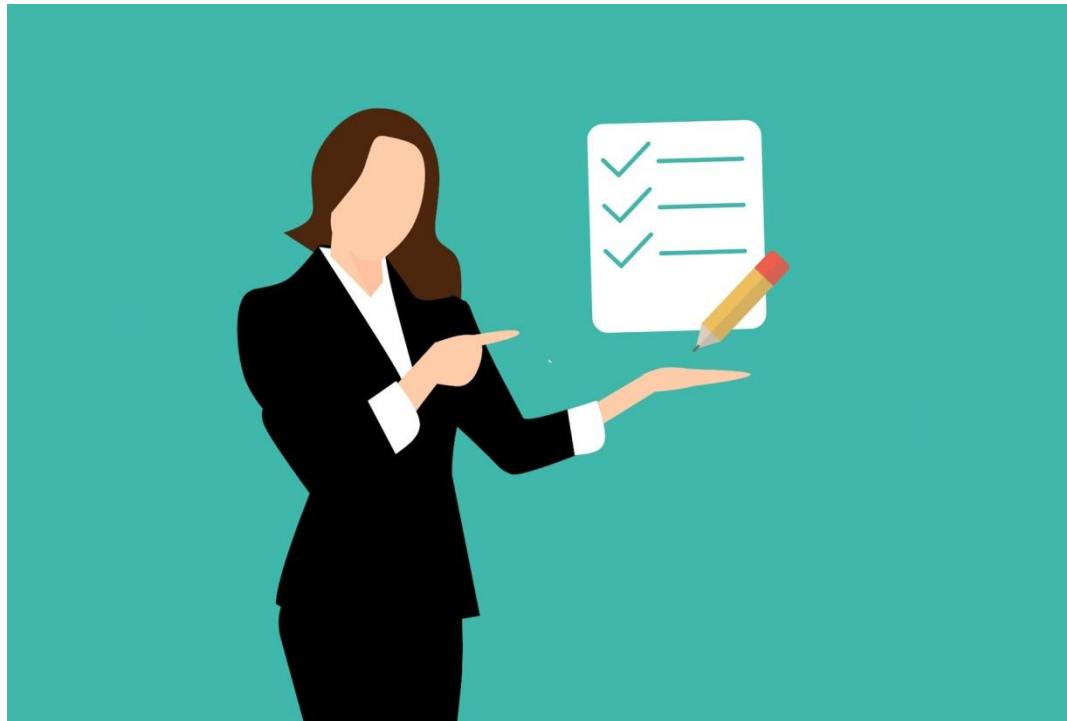


What do our users know about Data Set?



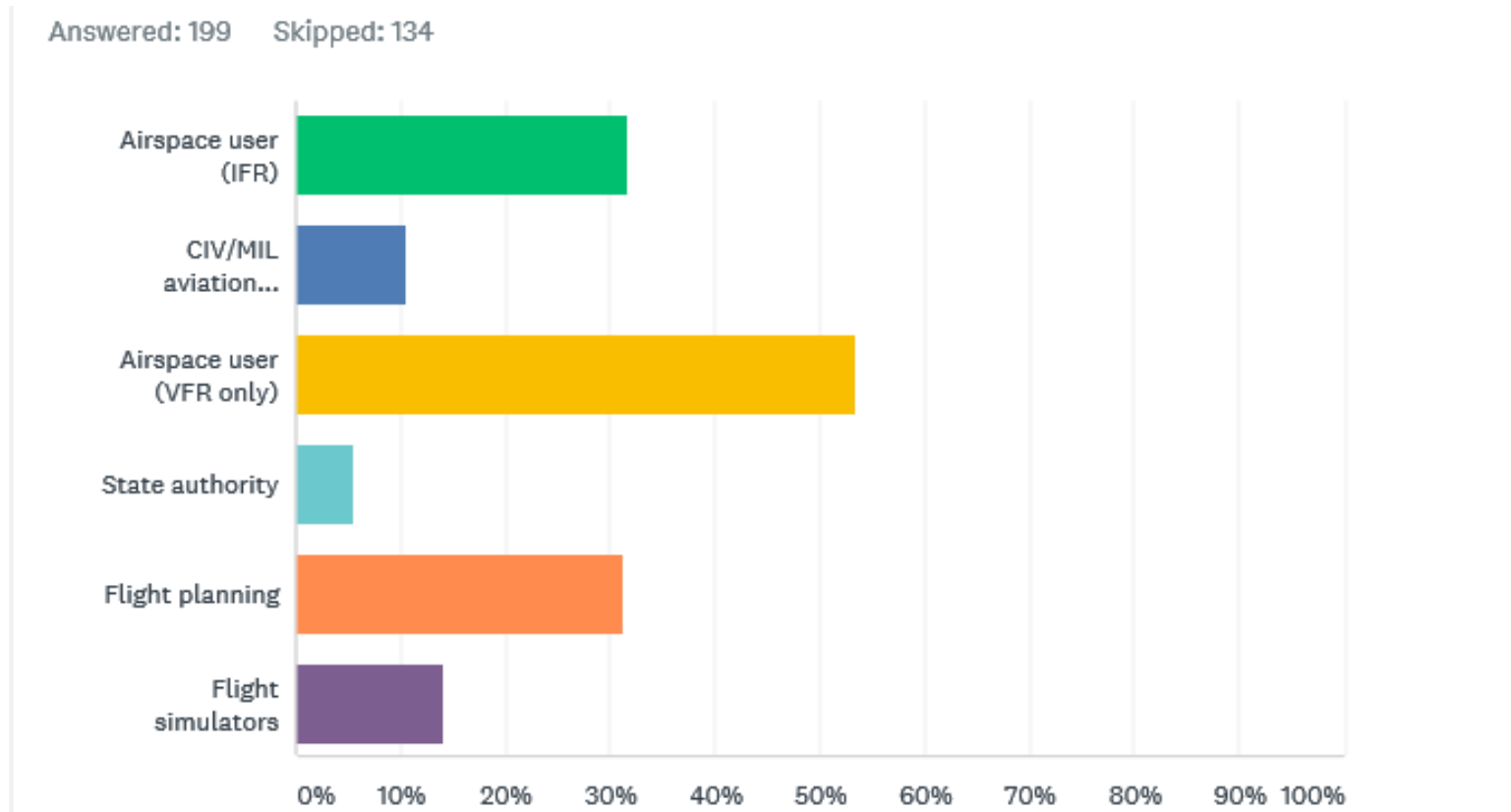
European Survey Results about the Data Sets implementation

- Survey created by Eurocontrol and member states
07-Feb-19 - 15-Mar-19
- 333 participants



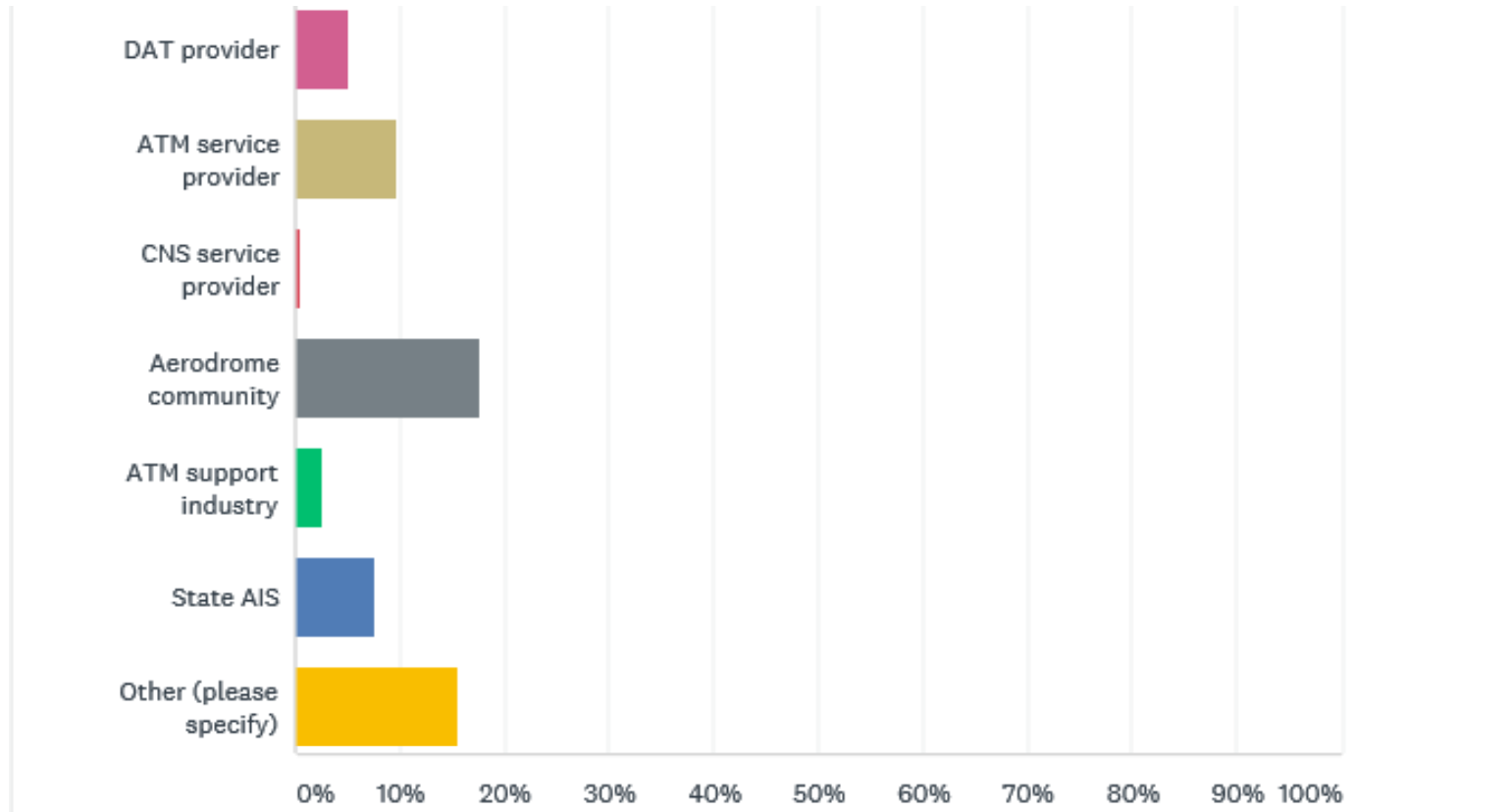
European Survey Results about the Data Sets implementation

- User category



European Survey Results about the Data Sets implementation

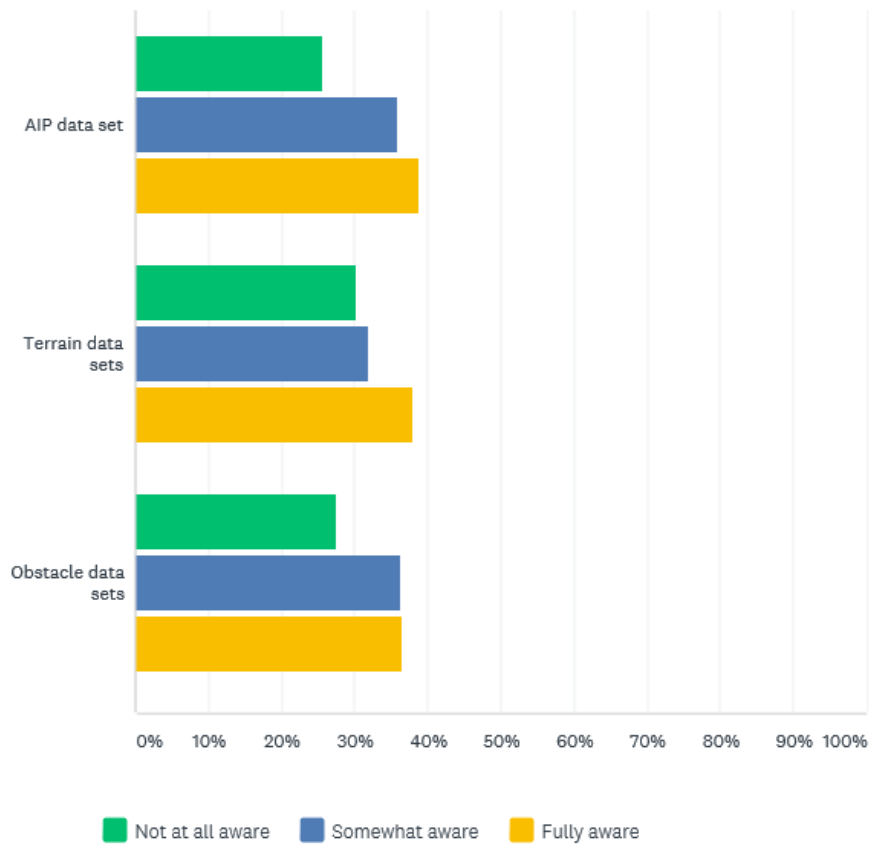
- User category



European Survey Results about the Data Sets implementation

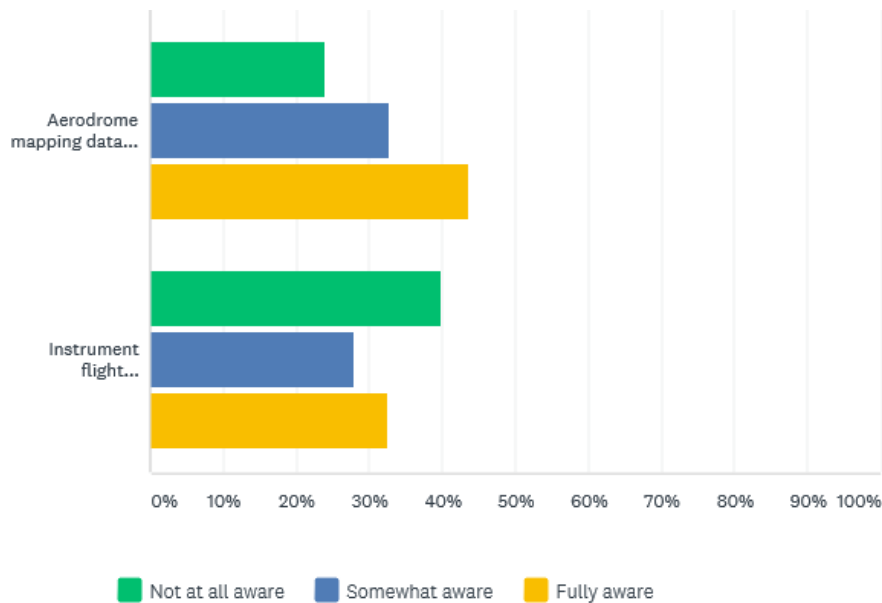
- Data Set awareness

Answered: 318 Skipped: 15



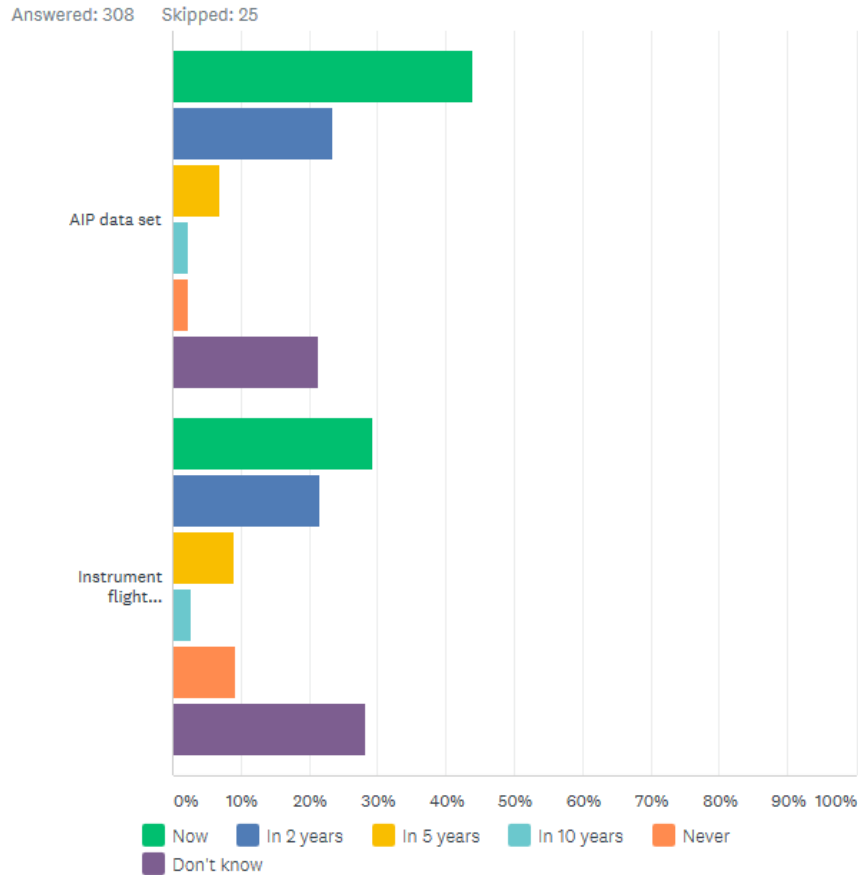
European Survey Results about the Data Sets implementation

- Data Set awareness



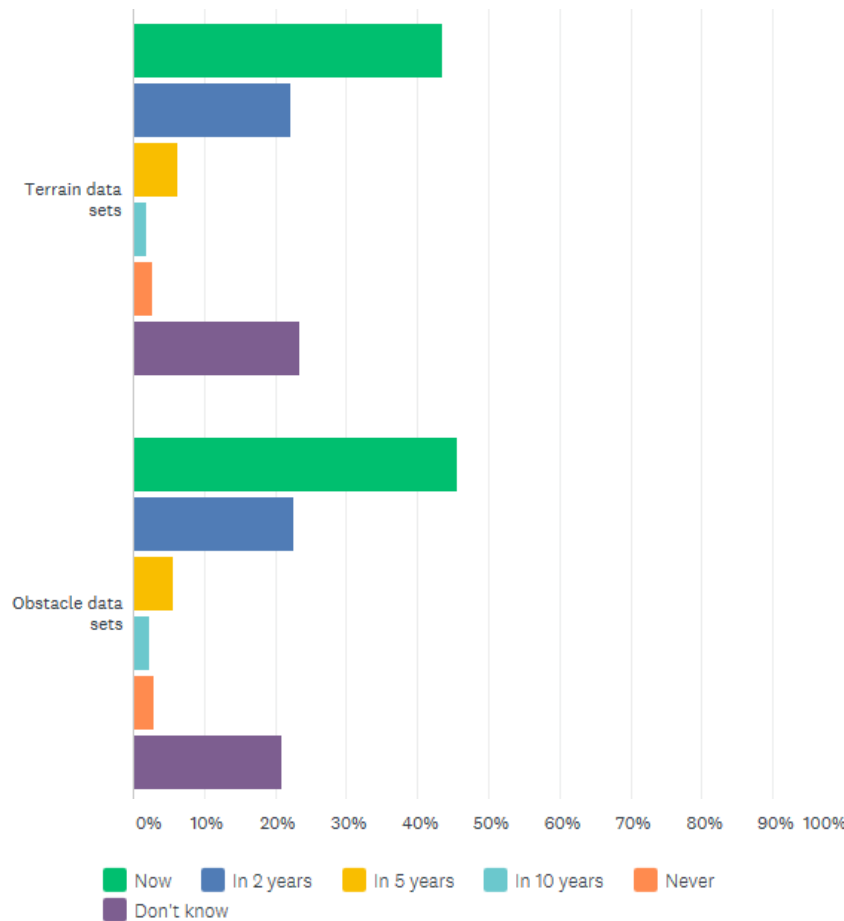
European Survey Results about the Data Sets implementation

- Capacity to use data sets



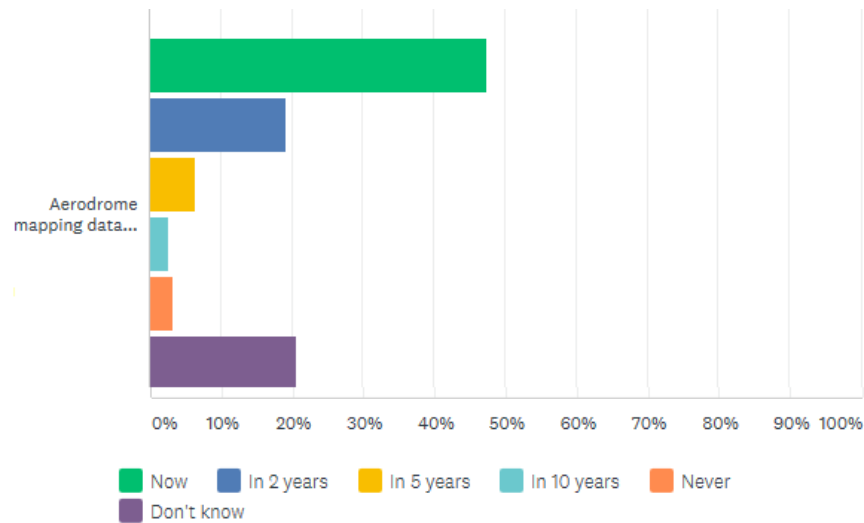
European Survey Results about the Data Sets implementation

- Capacity to use data sets



European Survey Results about the Data Sets implementation

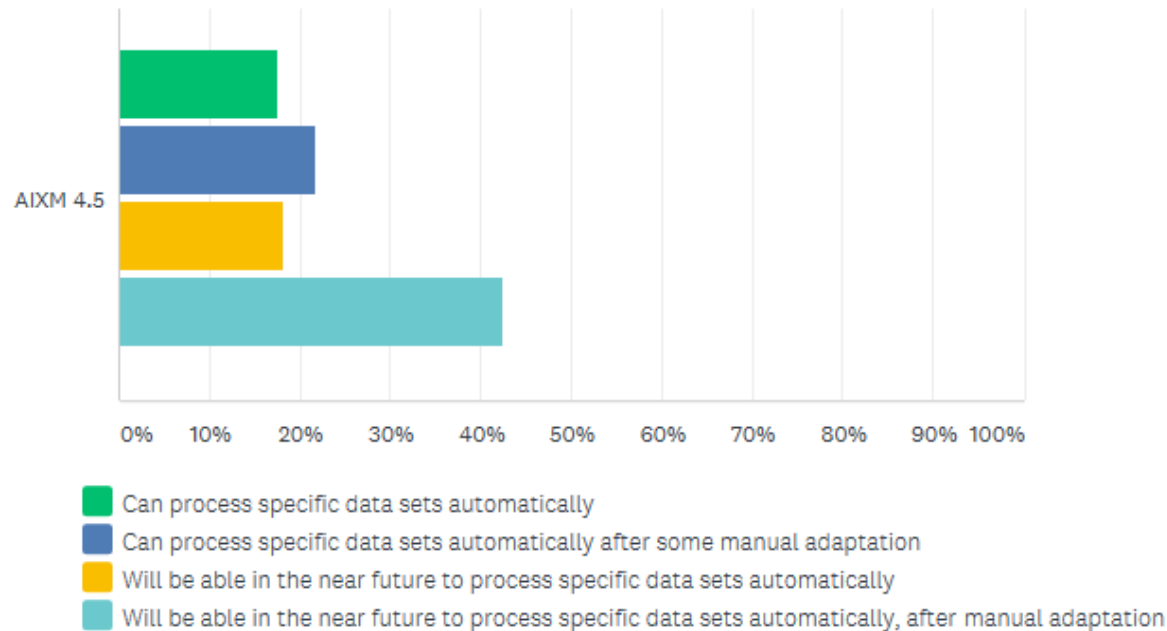
- Capacity to use data sets



European Survey Results about the Data Sets implementation

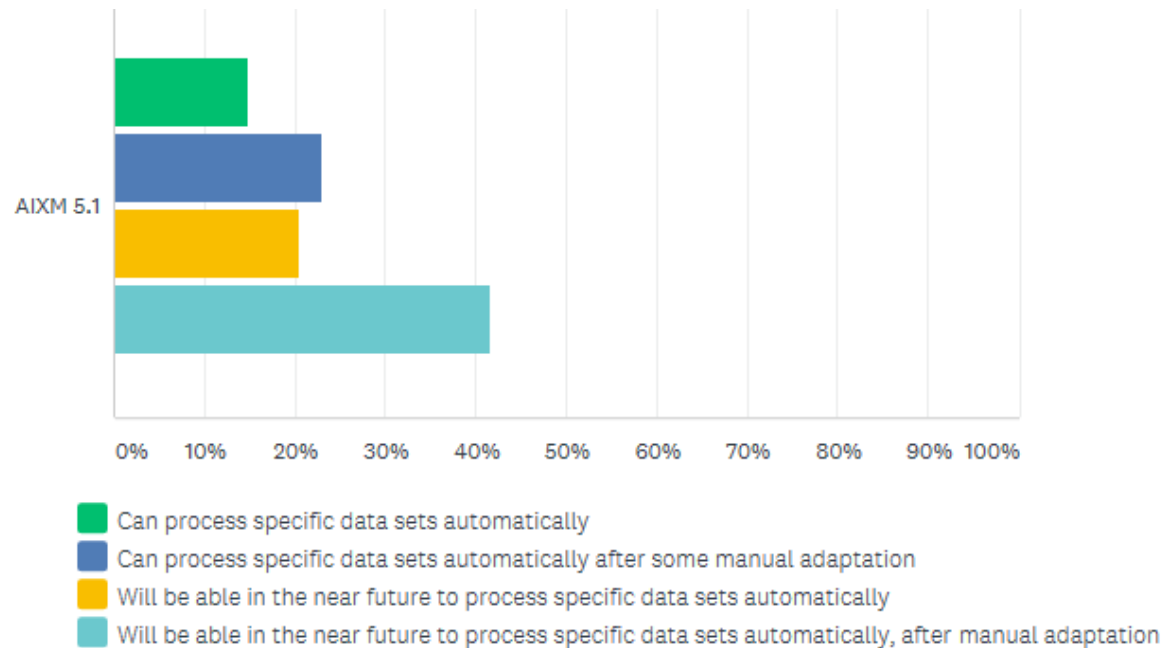
- Data Format

Answered: 261 Skipped: 72



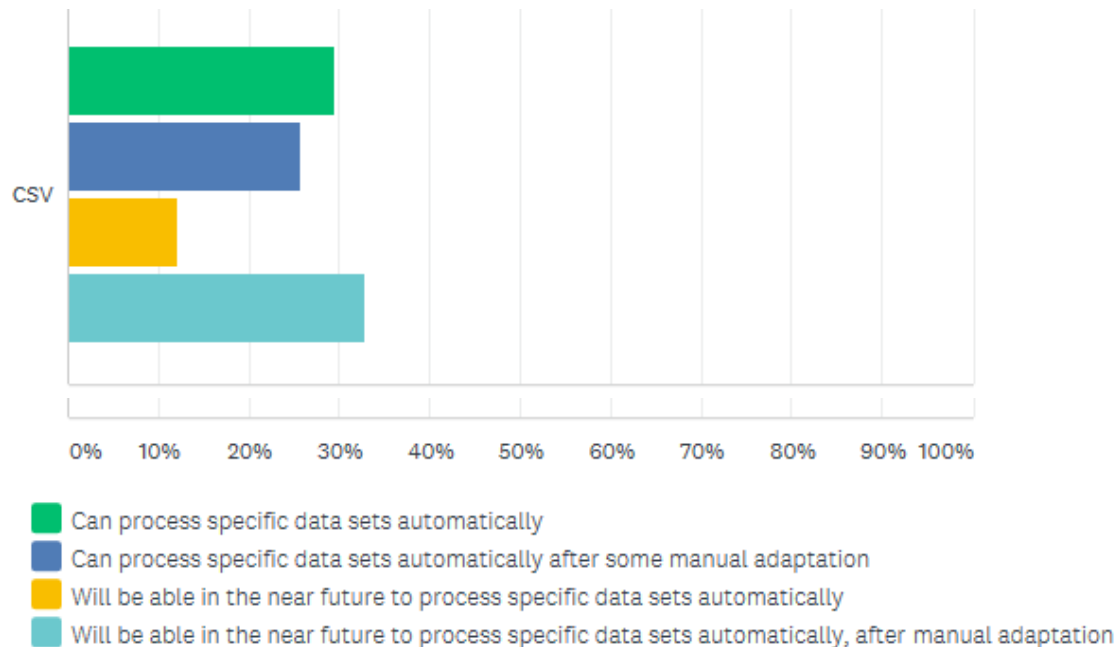
European Survey Results about the Data Sets implementation

- Data Format



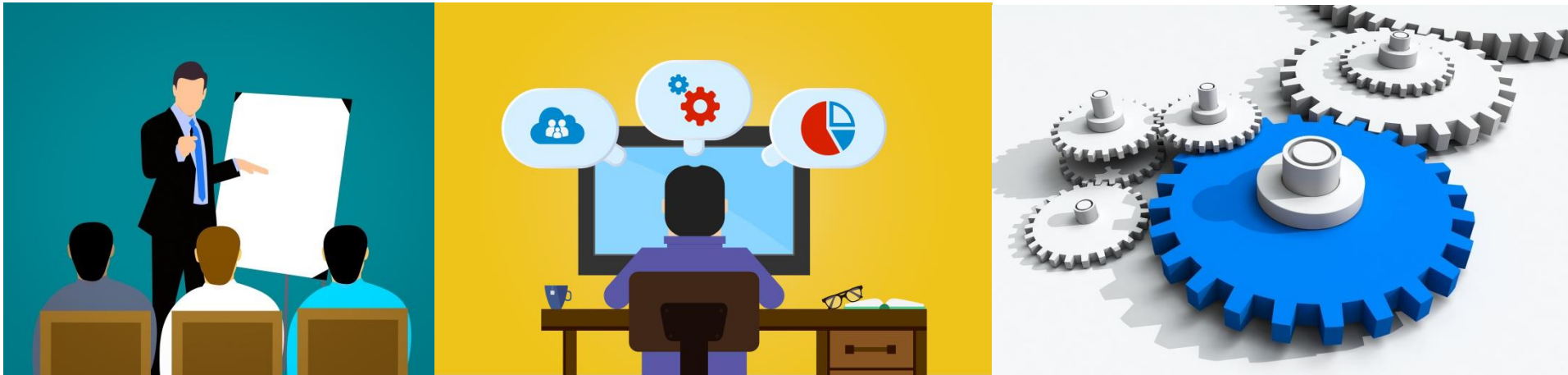
European Survey Results about the Data Sets implementation

- Data Format



European Survey Results about the Data Sets implementation

- Potential difficulties
 - Training
 - Hardware/software
 - Interoperability
 - inability of end user devices
 - documentation
 - etc.



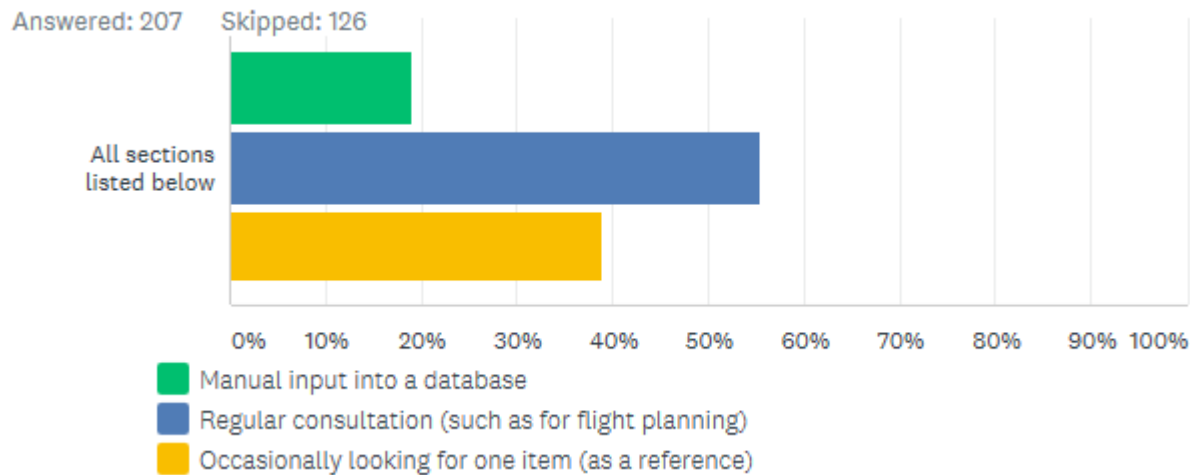
European Survey Results about the Data Sets implementation

- Other data sets
 - The majority is not interested in additional data sets
 - Some shown interest in temporal data (NOTAM, etc.)
 - Visual reporting points and VFR data were also mentioned.
 - digital MET was also mentioned



European Survey Results about the Data Sets implementation

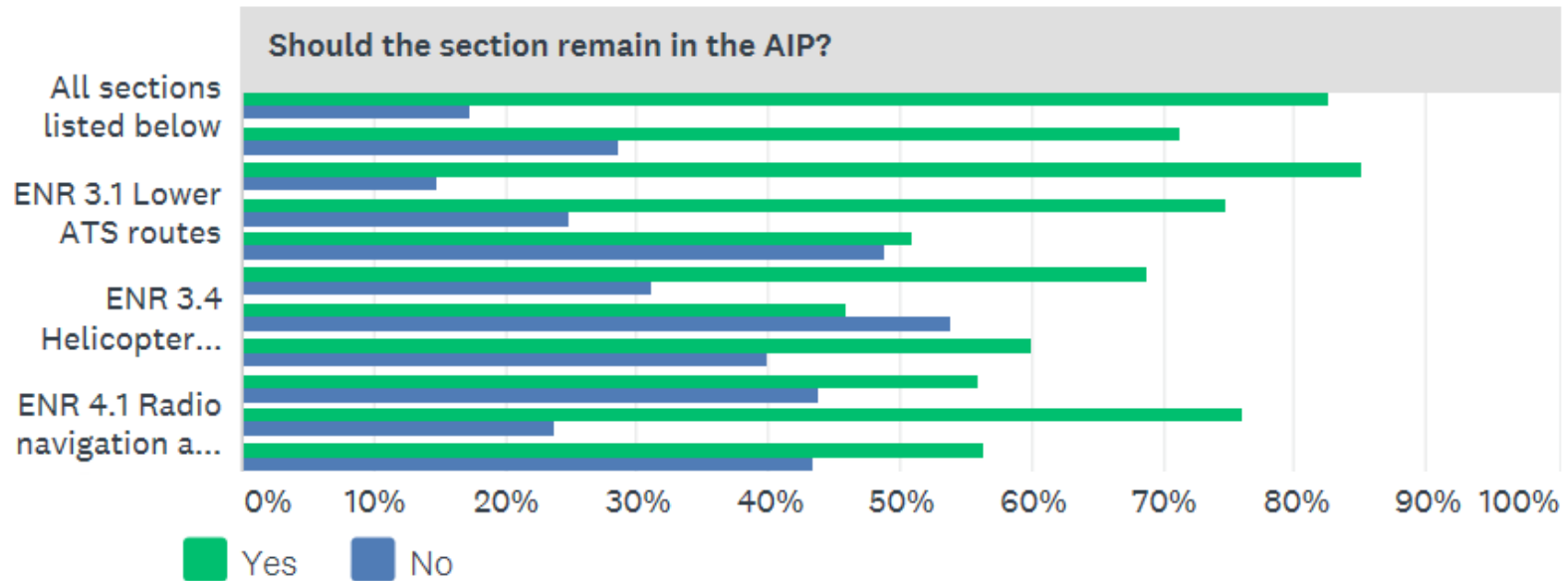
- Current use of the AIP Tables



European Survey Results about the Data Sets implementation

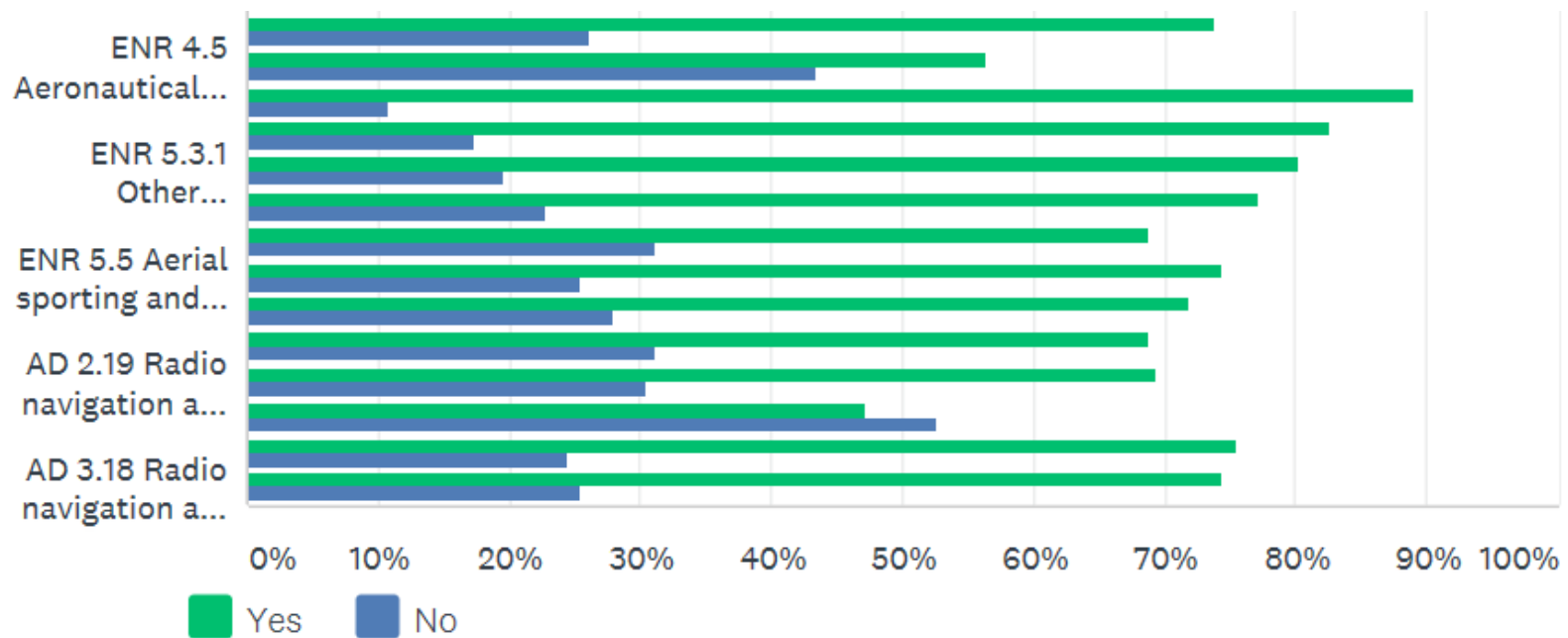
- AIP Tables necessity

Answered: 176 Skipped: 157



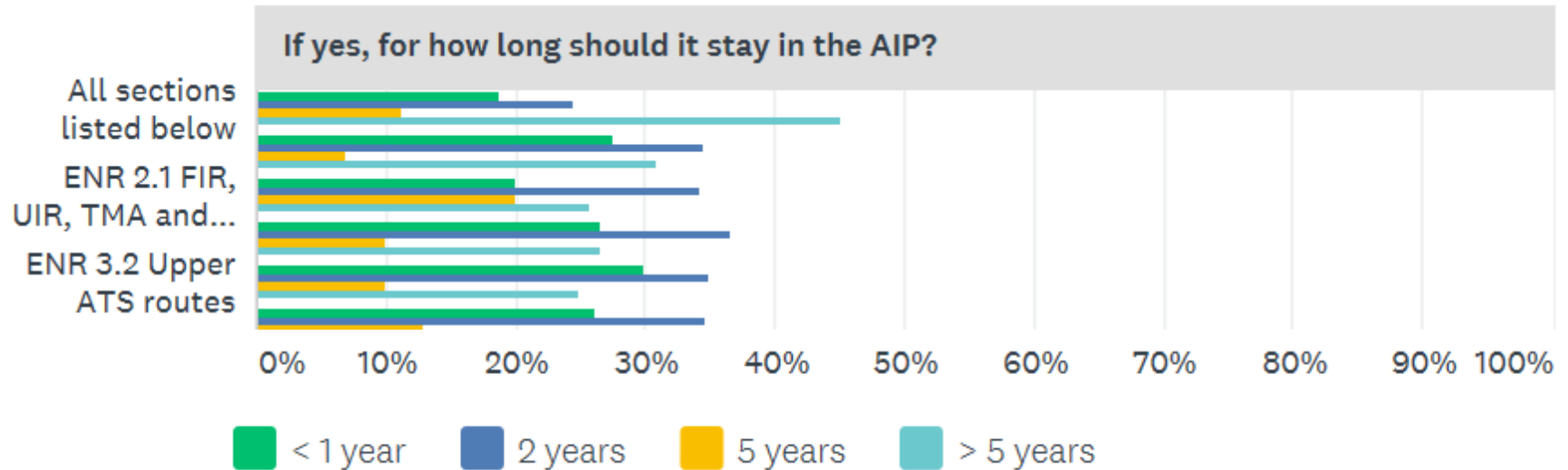
European Survey Results about the Data Sets implementation

- AIP Tables necessity



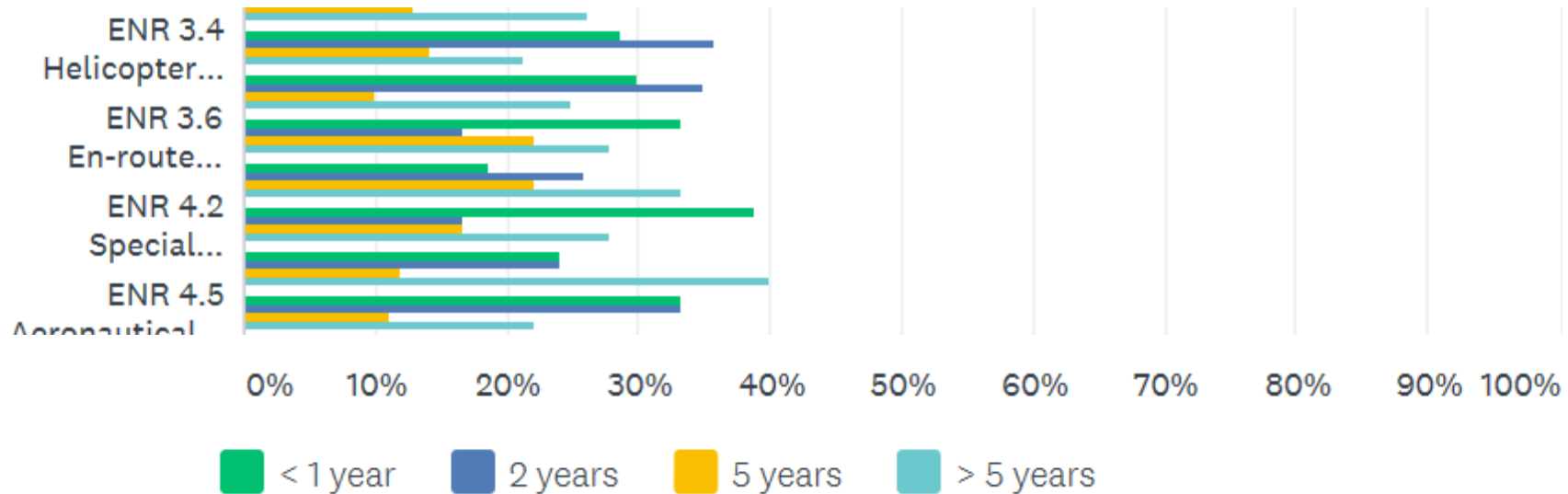
European Survey Results about the Data Sets implementation

- AIP Tables necessity



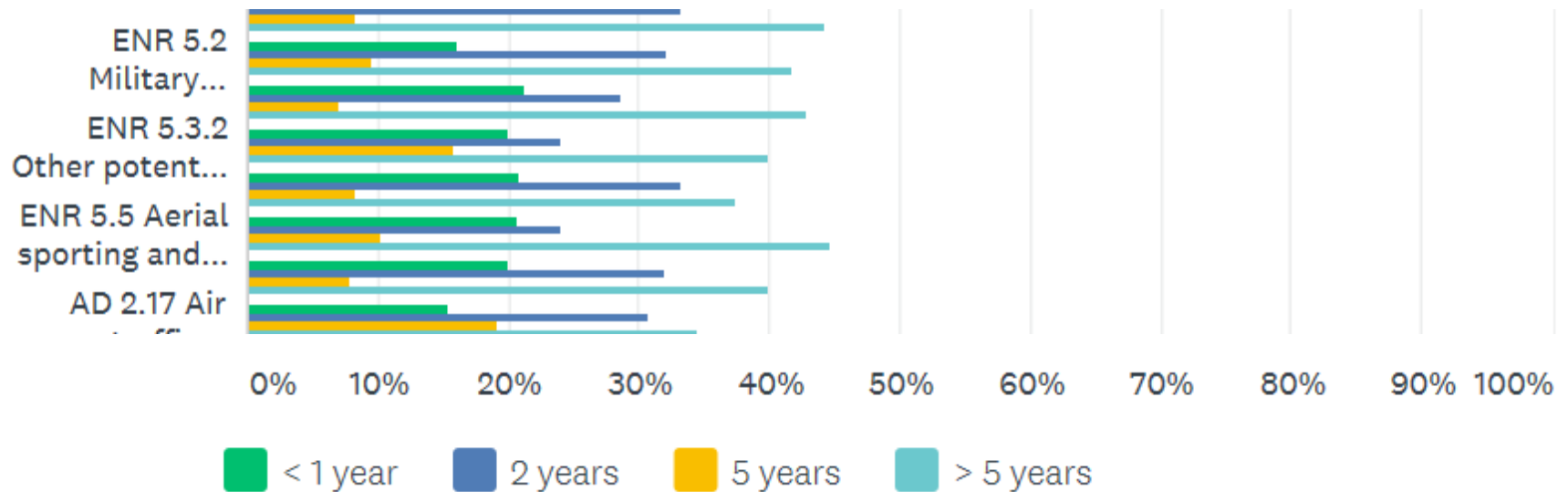
European Survey Results about the Data Sets implementation

- AIP Tables necessity



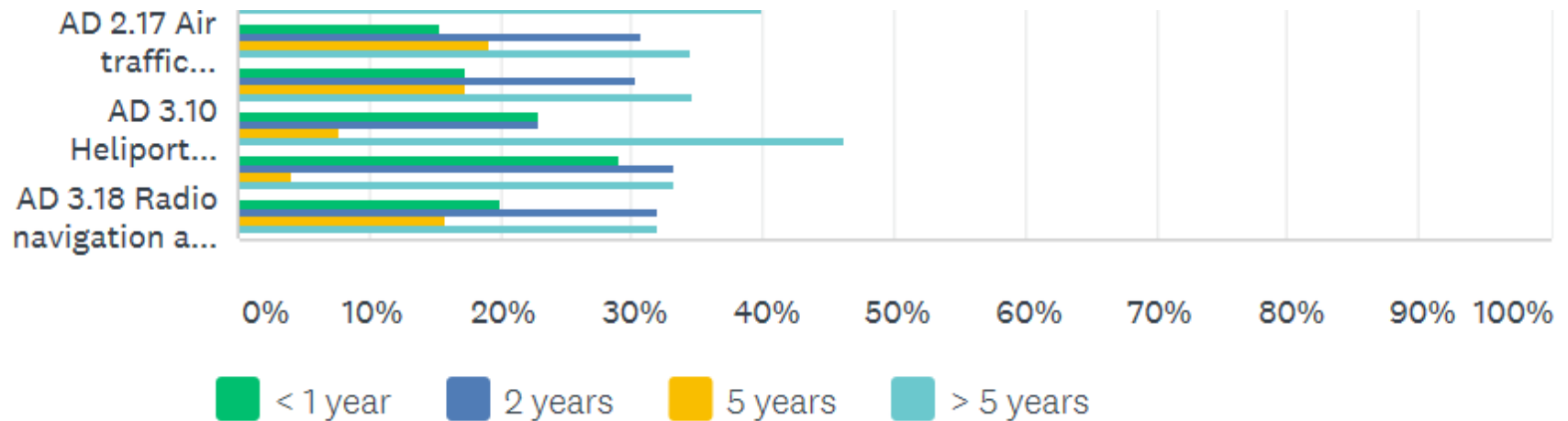
European Survey Results about the Data Sets implementation

- AIP Tables necessity



European Survey Results about the Data Sets implementation

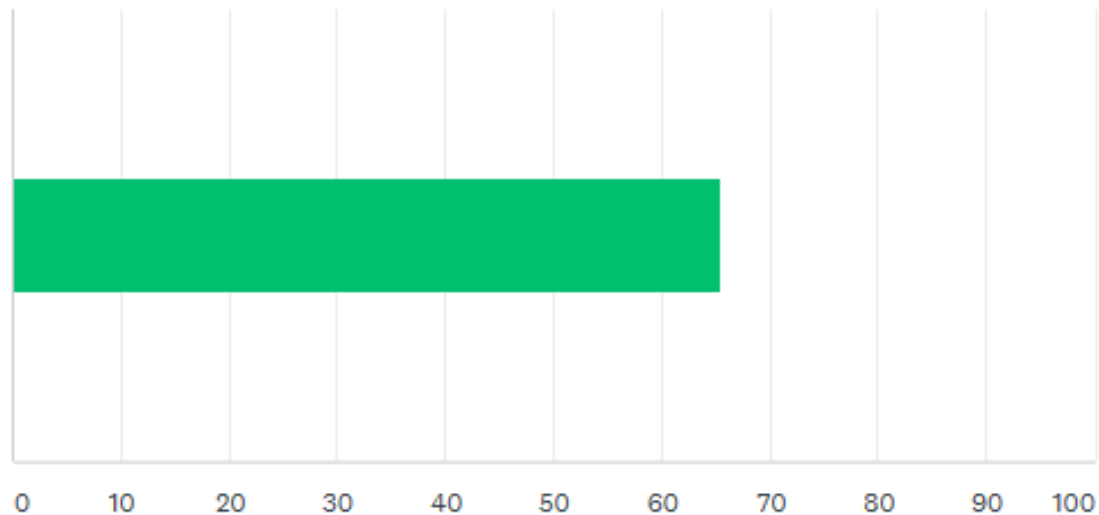
- AIP Tables necessity



European Survey Results about the Data Sets implementation

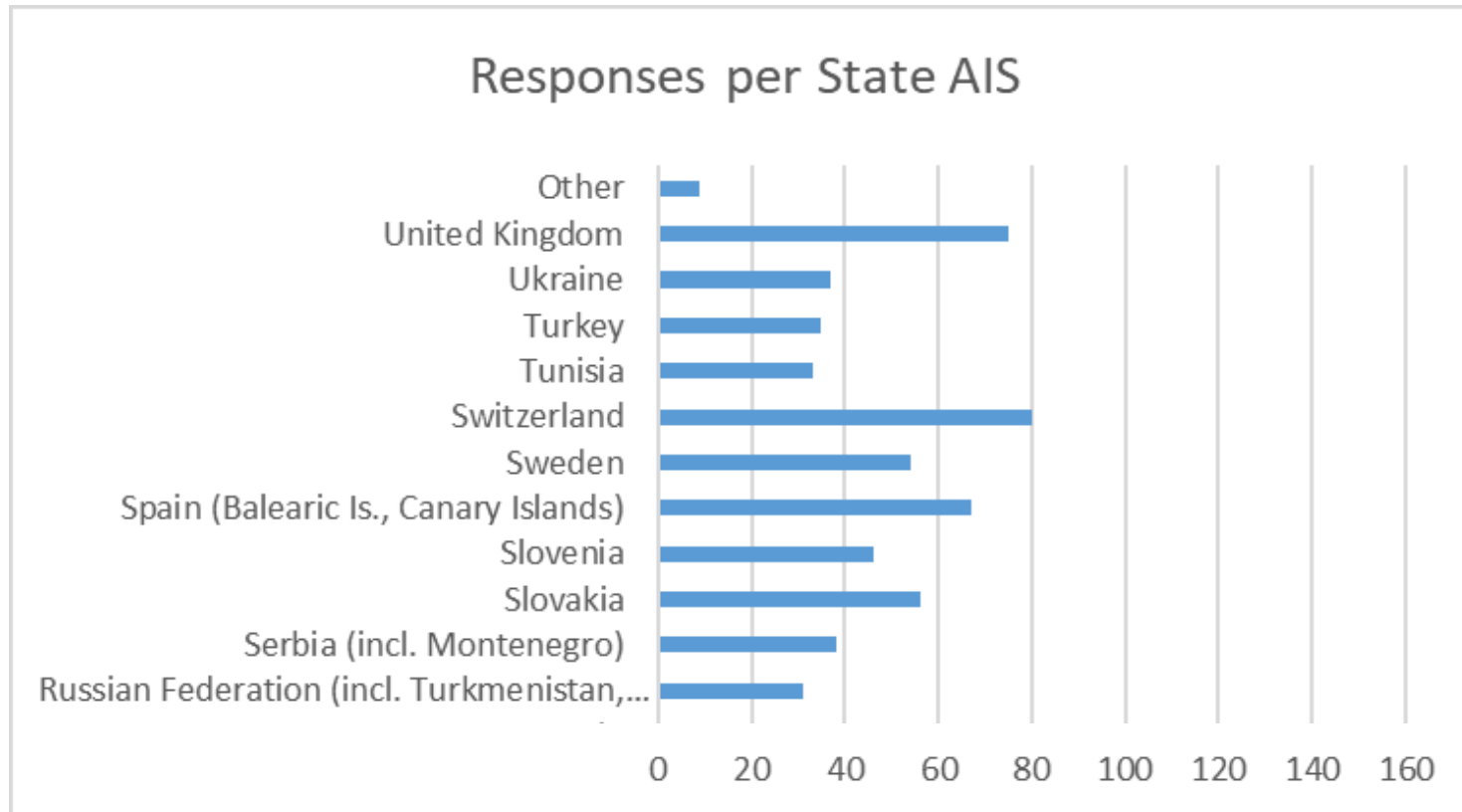
- Need of coordination and harmonization

Answered: 193 Skipped: 140



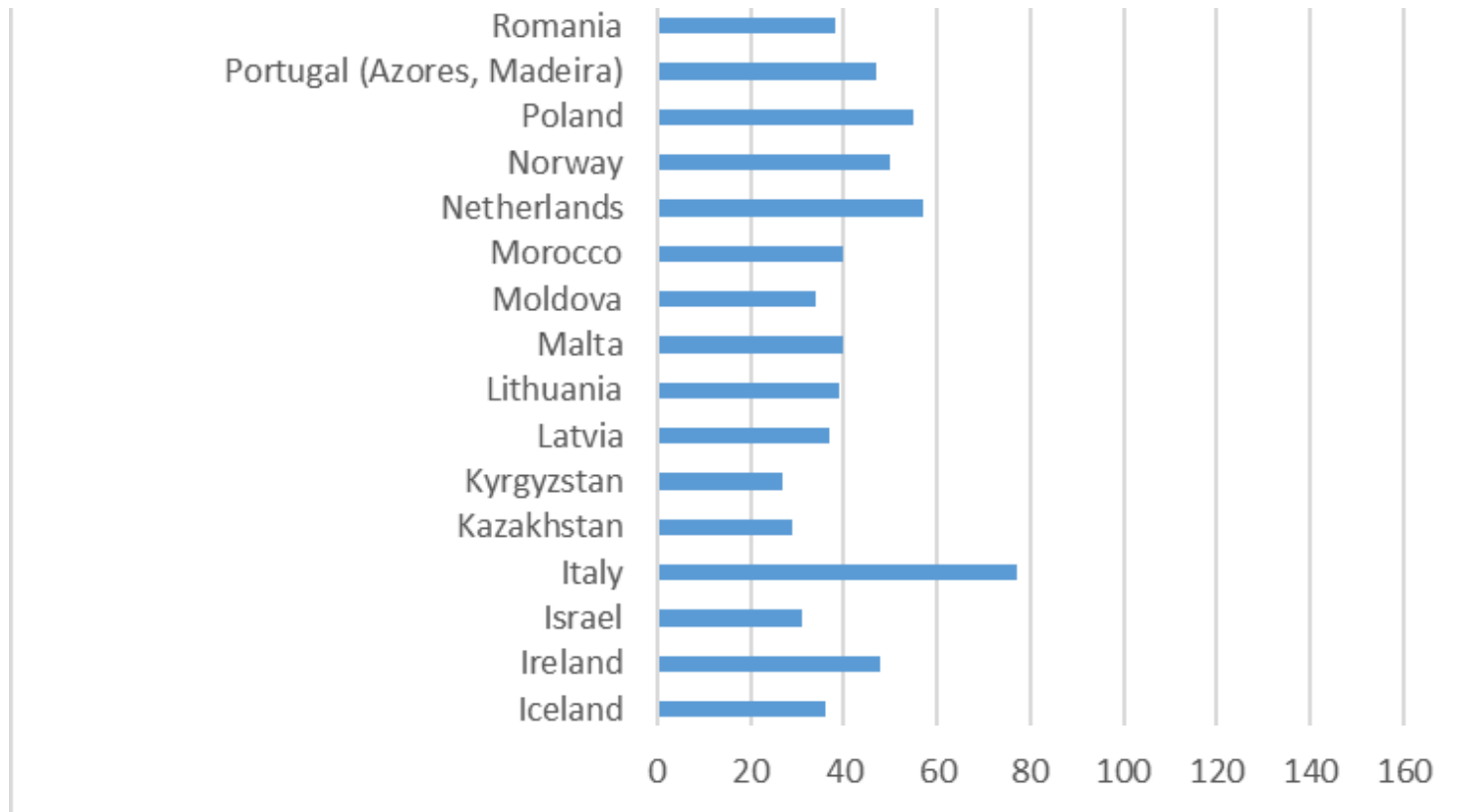
European Survey Results about the Data Sets implementation

- Responses per state AIS



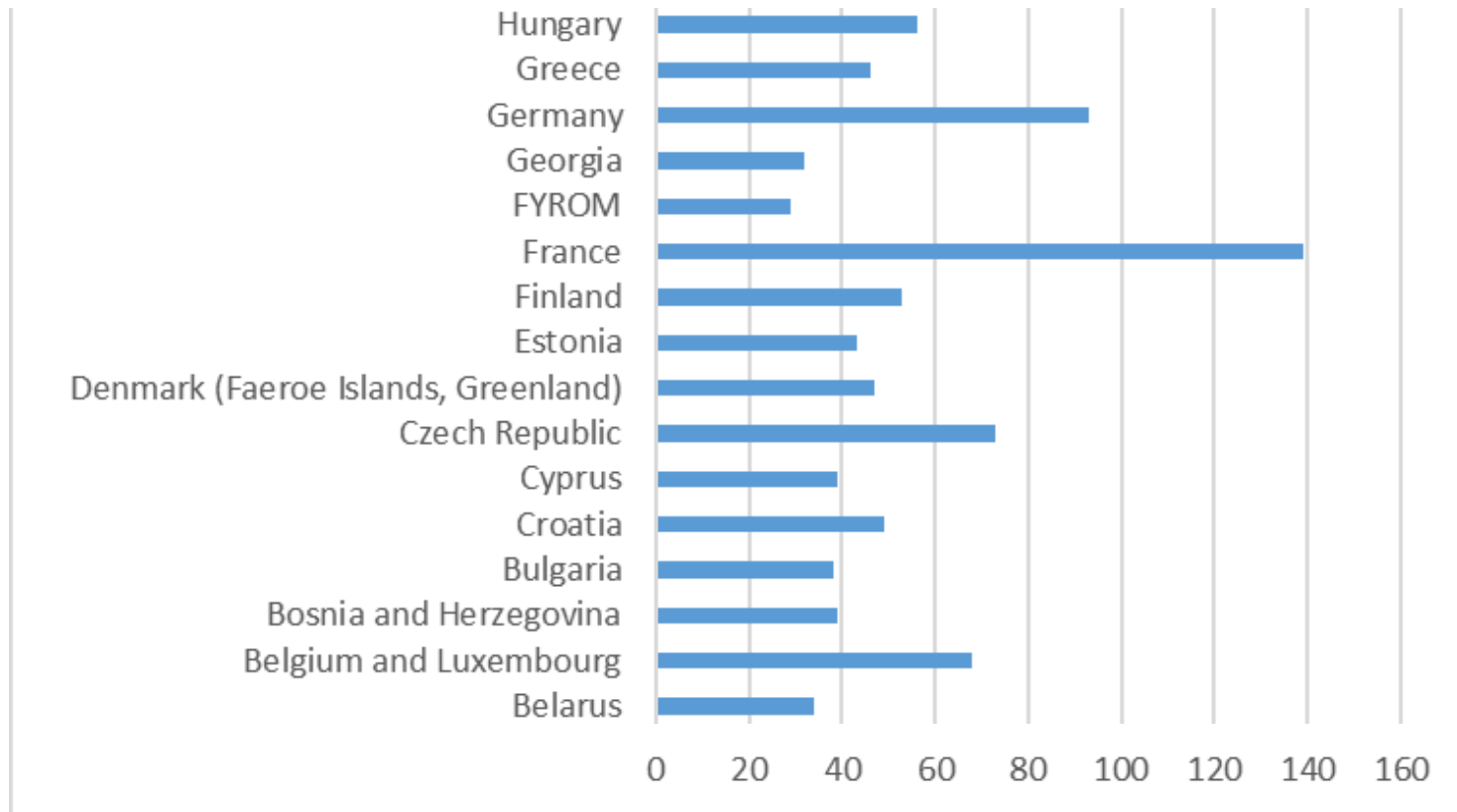
European Survey Results about the Data Sets implementation

- Responses per state AIS



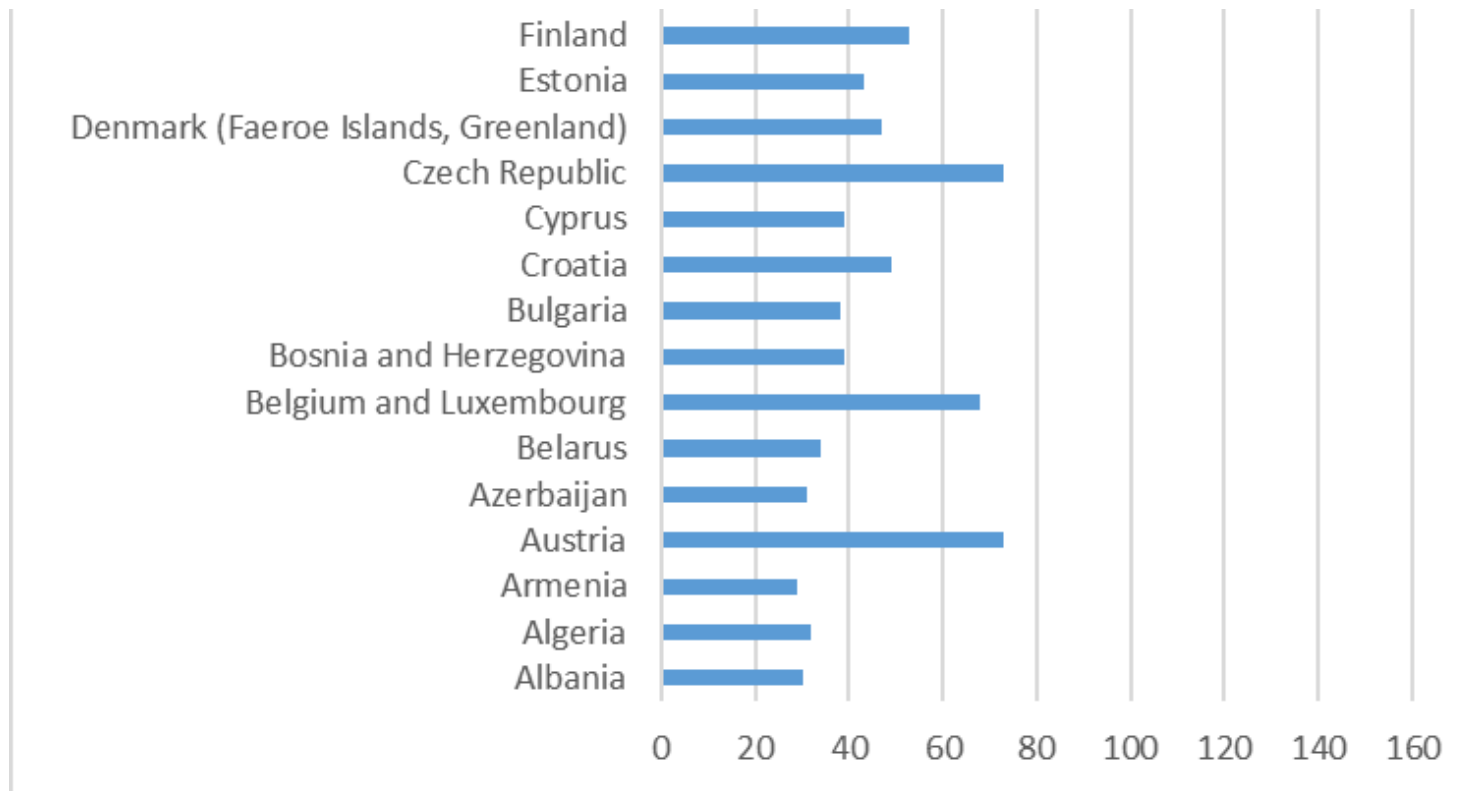
European Survey Results about the Data Sets implementation

- Responses per state AIS



European Survey Results about the Data Sets implementation

- Responses per state AIS



AIP DATA SET

AIP Data Set - Scope

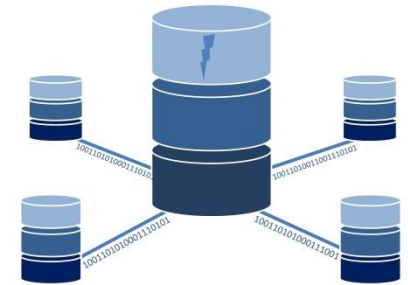
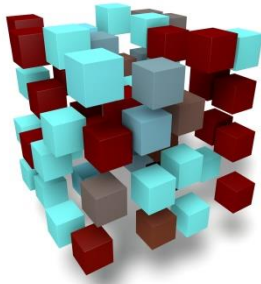
- Doc. 10066 – PANS-AIM

5.2.1.1.3 When the AIP data set (as specified in 5.3.3.1) is provided, the following sections of the AIP may be omitted and reference to the data set availability shall be provided:

- | | | |
|------------|------------|-----------------|
| a) GEN 2.5 | h) ENR 3.6 | o) ENR 5.3.1 |
| b) ENR 2.1 | i) ENR 4.1 | p) ENR 5.3.2 |
| c) ENR 3.1 | j) ENR 4.2 | q) ENR 5.5 |
| d) ENR 3.2 | k) ENR 4.4 | r) ****AD 2.17 |
| e) ENR 3.3 | l) ENR 4.5 | s) **** AD 2.19 |
| f) ENR 3.4 | m) ENR 5.1 | t) **** AD 3.16 |
| g) ENR 3.5 | n) ENR 5.2 | u) **** AD 3.18 |

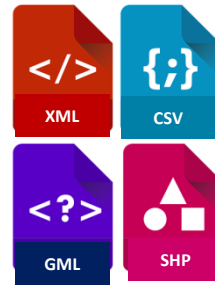
AIP Data Set – Impact in EAD

- Format
- Metadata
- Temporality / validity – AMDT / SUP, lifecycle
- Validation
- Storage and provision



AIP Data Set – Impact in EAD

Data Format



- Annex 15

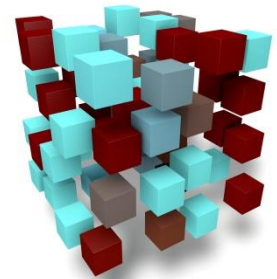
2.3.10 Globally interoperable aeronautical data and aeronautical information exchange models shall be used for the provision of data sets.

- Doc 10066 – PANS-AIM

5.3.1.5 The aeronautical information model used should:

- a) use Unified Modelling Language (UML) to describe the aeronautical information features and their properties, associations and data types;
 - b) include data value constraints and data verification rules;
 - c) include provisions for metadata as specified in 4.2.1 and 5.3.2; and
 - d) include a temporality model to enable capturing the evolution of the properties of an aeronautical information feature during its life cycle.
- Options: CSV, ARINC 424, AIXM 4.5, AIXM 5.1, AIXM 5.1.1, etc.
 - EAD (recommendation): AIXM 5.1

AIP Data Set – Impact in EAD Metadata



- Doc. 10066 – PANS-AIM

5.3.2 Metadata

Each data set shall include the following minimum set of metadata:

- a) the names of the organization or entities providing the data set;
- b) the date and time when the data set was provided;
- c) period of validity of the data set; and
- d) any limitations with regard to the use of the data set.

Note.— ISO Standard 19115 specifies requirements for geographic information metadata.

- Options:
 - Metadata Format – ej.. AIXM 5.1 – ISO 19115 – METADATA PROFILE (!)
 - AIXM 5.1 – metadata level: message, feature, time slice.
- EAD (recommendation):
 - Implement the coding guidelines by EUROCONTROL “AIP Data Set - AIXM Coding Specification”

AIP Data Set – Impact in EAD

Temporality / Validity

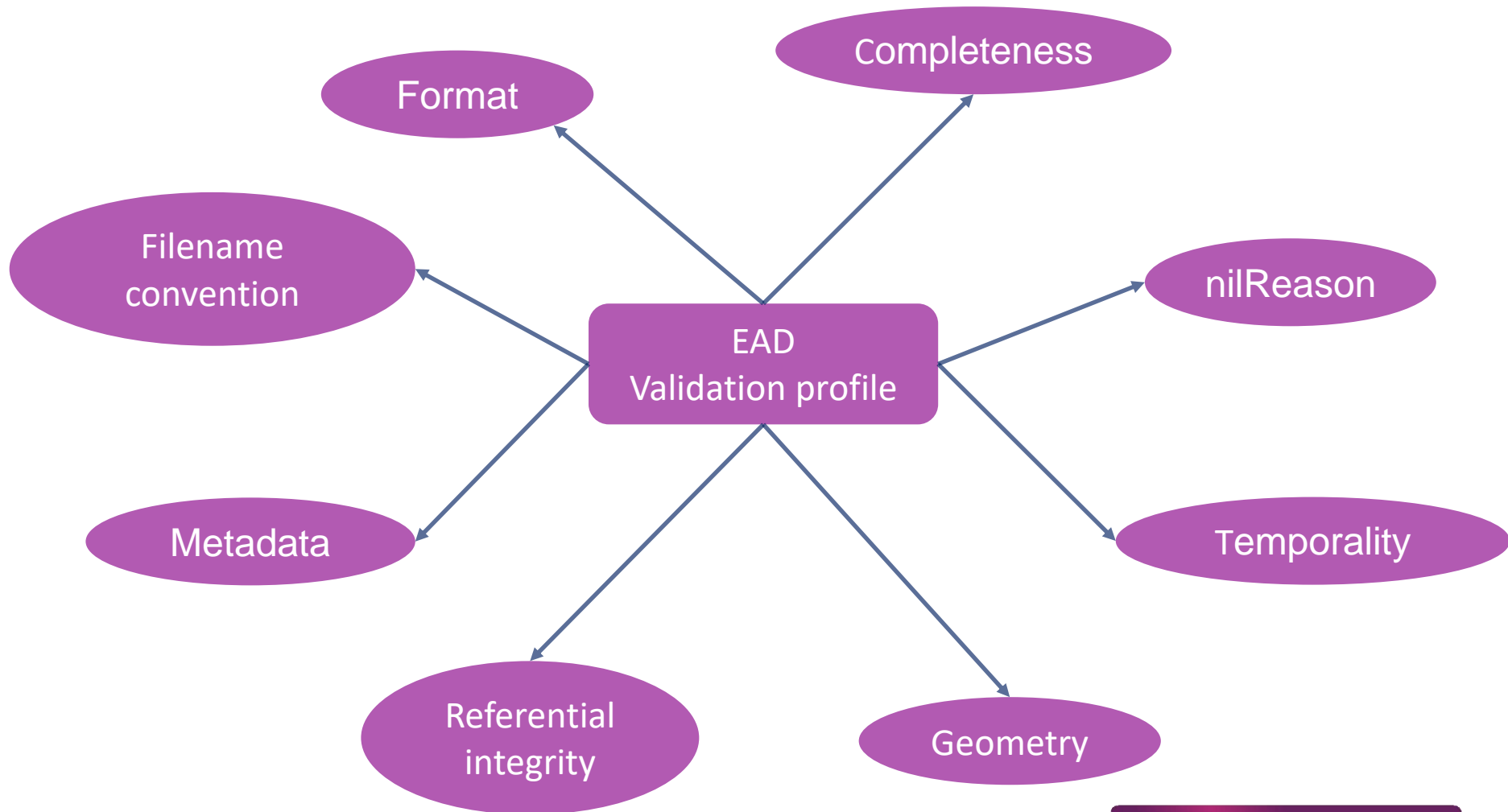


- Annex 15

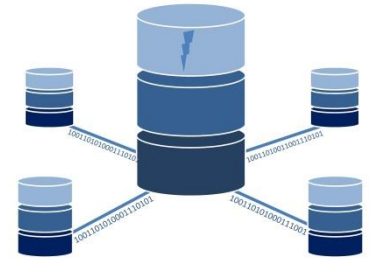
6.3.3.2 Permanent changes and temporary changes of long duration (three months or longer) made available as digital data shall be issued in the form of a complete data set or a subset that includes only the differences from the previously issued complete data set.

- Permanent changes = AMDT
- Log term temporal changes= SUP
- EAD (recommendation):
 - Permanent changes – AIXM 5.1 Temporality Concept – **BASELINE**
 - Temporal changes – AIXM 5.1 Temporality Concept – **TEMPDELTA**

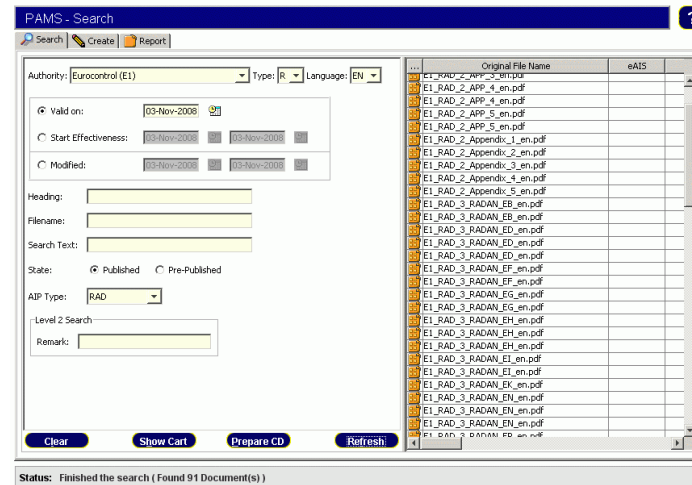
AIP Data Set – Impact in EAD Validation



AIP Data Set – Impact in EAD Storage and Provision

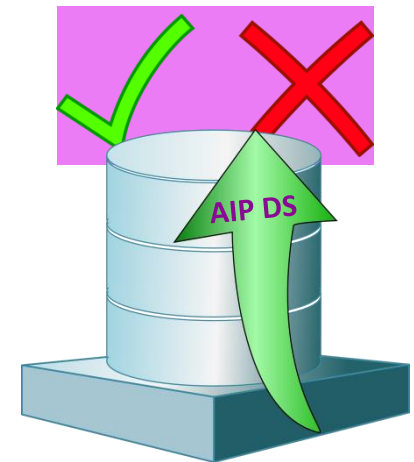
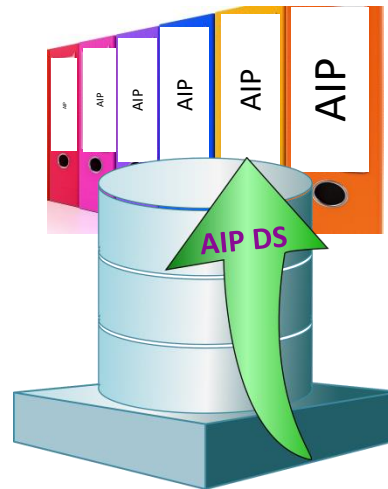
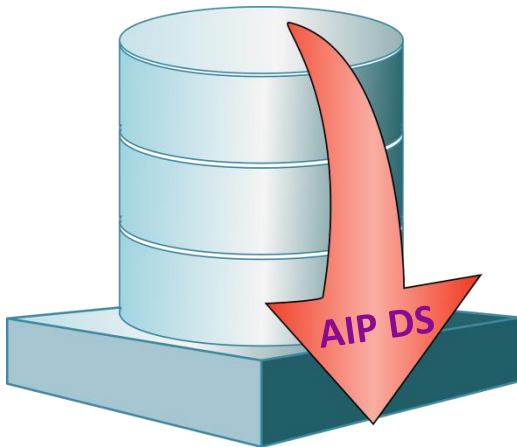


- Storage
 - PAMS (Published AIP Management System)
- Provision
 - Similar service of PAMS files
- Challenges
 - File structure
 - Format – AIXM 5.1 files
 - B2B provision (AIMSL en PAMS)



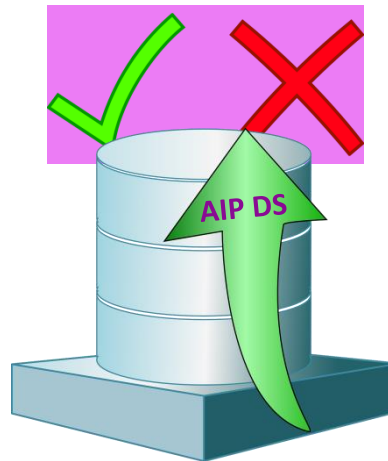
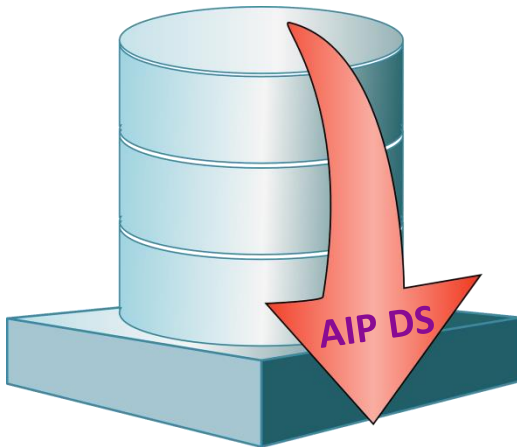
AIP Data Set – EAD Service Perspective

- EAD Clients
 - Data Providers EADPro
 - Service for creating the state AIP Data set from EAD
 - Service for storing the state AIP Data Set from EAD (PAMS)
 - Data Providers MyEAD
 - Service for storing the state AIP Data Set from EAD (PAMS)
 - Service for AIP Data Set validation



AIP Data Set – EAD Service Perspective

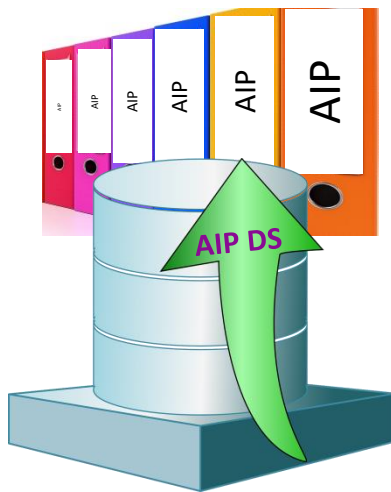
- EAD Clients
 - Data users
 - Service for AIP Data Sets provision
 - Service for AIP Data Sets validation
 - Service for human readable products –e.g. HTML tables
 - Service for creating/providing an ECAC/WW AIP Data Set.



Campo 1	Campo 2	Campo 3	Campo 4

AIP Data Set – EAD Service Perspective

- EAD DOP (Data Operations Provider – GroupEAD)
 - Maintenance of WW data in the AIP data set context.
 - Quality consistency reviews in the EAD data in the context of the AIP Data Set.



AIP Data Set – EAD Implementation

- Reference: EUROCONTROL “AIP Data Set - AIXM Coding Specification”



- Progressive Implementation
 - AIP Data Set Provision (Clients with AIP license)
 - PAMS
 - AIP data sets Storage – Both the created in EAD and external
 - AIMSL
 - AIMSL extension for PAMS service coverage
- Long term
 - Capacity of producing AIP Data Sets from SDD (AIXM 5.1)
 - Validation services (internal / external)
 - Human-readable data-sets provision
 - ECAC AIP data set provision

Be part of the AIM revolution!

www.groupead.com

Contact us

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