

# **MIA and Areas of Common Interest: The safety net for close-border aeronautical information**

Background, principles and benefits of harmonisation and  
exchange processes/agreements

## Background and history <sup>(1)</sup>

Mitigating existing inconsistencies is not enough.

How can AIS (AIM) contribute to the prevention of inconsistencies in cross-border aeronautical information?

The idea which generated the concept was born:

# (AIM) Mandatory Information Area(s)

(used rather frequently in the FABEC AIM MIA MoU) (I love these acronyms)



## Background and history <sup>(2)</sup>

- Data origination is a genuine task of airspace designers.
- Publication of aeronautical information is a genuine task of AIS (AIM).
- Data originators inform their AIS about publication requirements, following established internal processes and timelines;
  - Relying on the assumption that there are zero errors / omissions / misunderstandings even when external (cross border) partners are involved;
  - Consequently, the AIS plays a passive role until late in the publication process.
- Involving the AIS at an early stage, thus assigning an active role w.r.t. the validation of subject information, can only be of advantage.



## Background and history <sup>(3)</sup>



## FABEC MIA MoU: Objectives

- Create a general plan for the bilateral and multilateral working arrangements between FABEC AIM units with respect to aeronautical data requiring co-ordination or information exchange, respectively.
- Avoid data inconsistencies between National datasets and subsequently, publication of non-harmonised data.
- Establish a methodology for AIM, which facilitates the identification of possible data inconsistencies originating from failed communication between two or more data originators on either side of a national border.
- Facilitate an overarching general description per FABEC partner, providing the details of the respective bilateral interfaces in Annex.

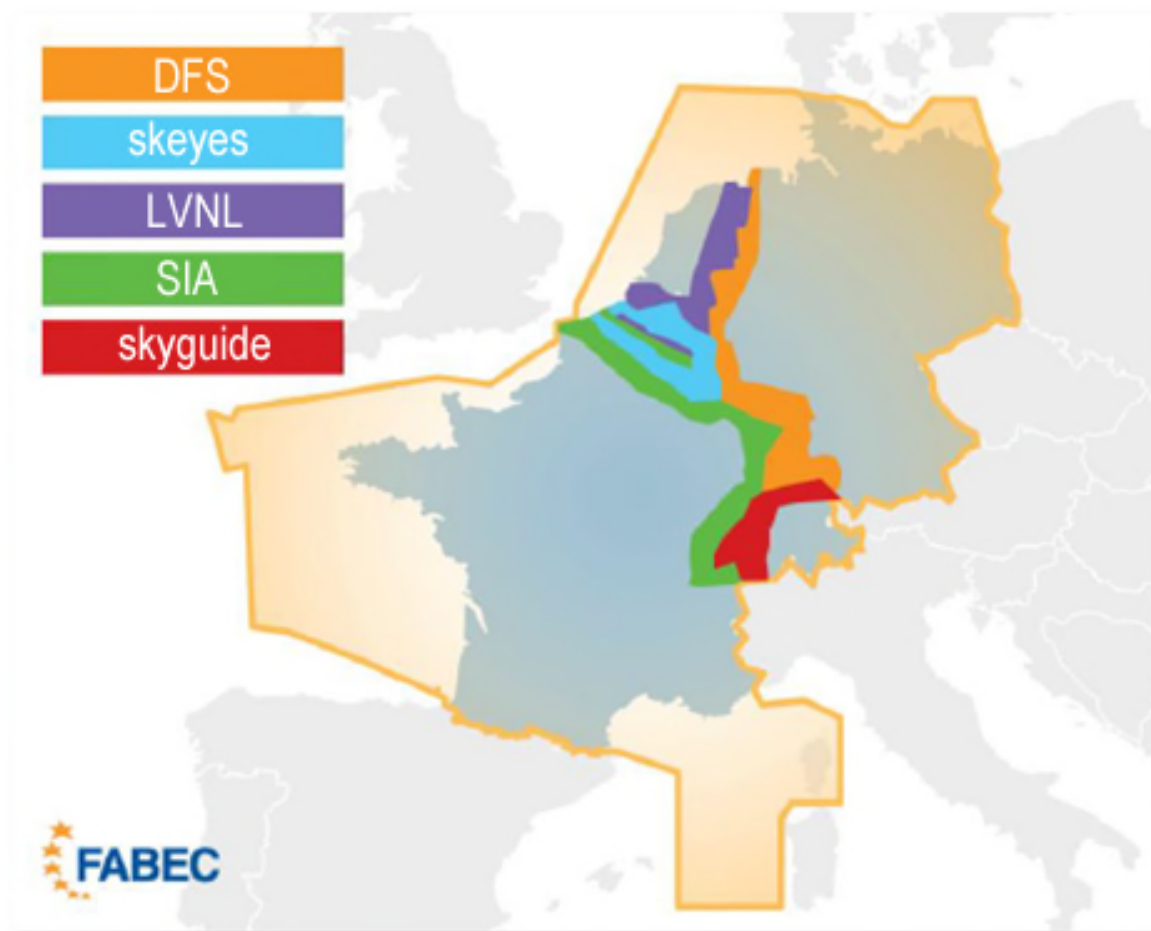


## FABEC MIA MoU: Specifications and requirements

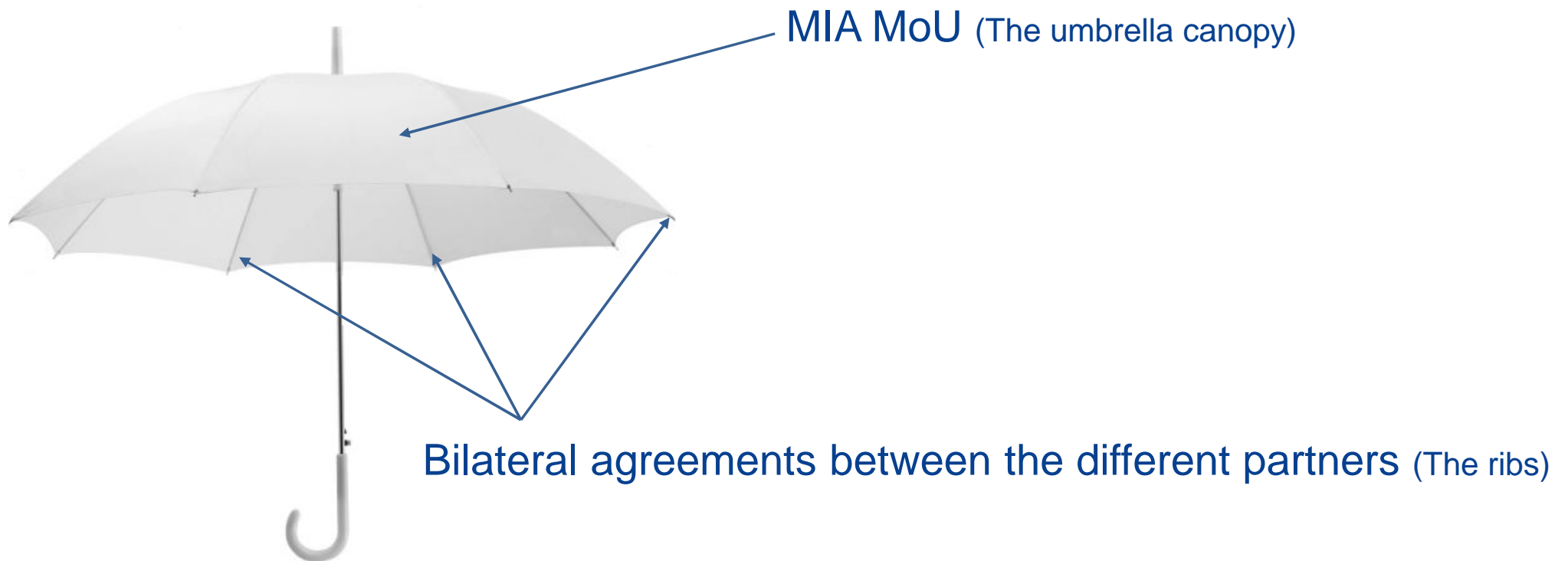
- The FABEC AIM Mandatory Information Areas (MIAs) are areas in which all data changes have to be aligned between the partners concerned, in order to maintain data consistency.
- [In case relevant data] is going to change within such an AIM MIA, the concerned neighbouring **AISPs** shall inform each other to enable data consistency.
- The purpose of the information is to safeguard that ANSPs' national databases can be harmonised / aligned with the common aeronautical database EAD SDO and that the national publications are harmonised.
- Each national MIA is constructed from the Information Request Areas (IRAs) **received** from the neighbouring countries.



## Annexes to the FABEC MIA MoU: The IRAs



## The umbrella and its ribs





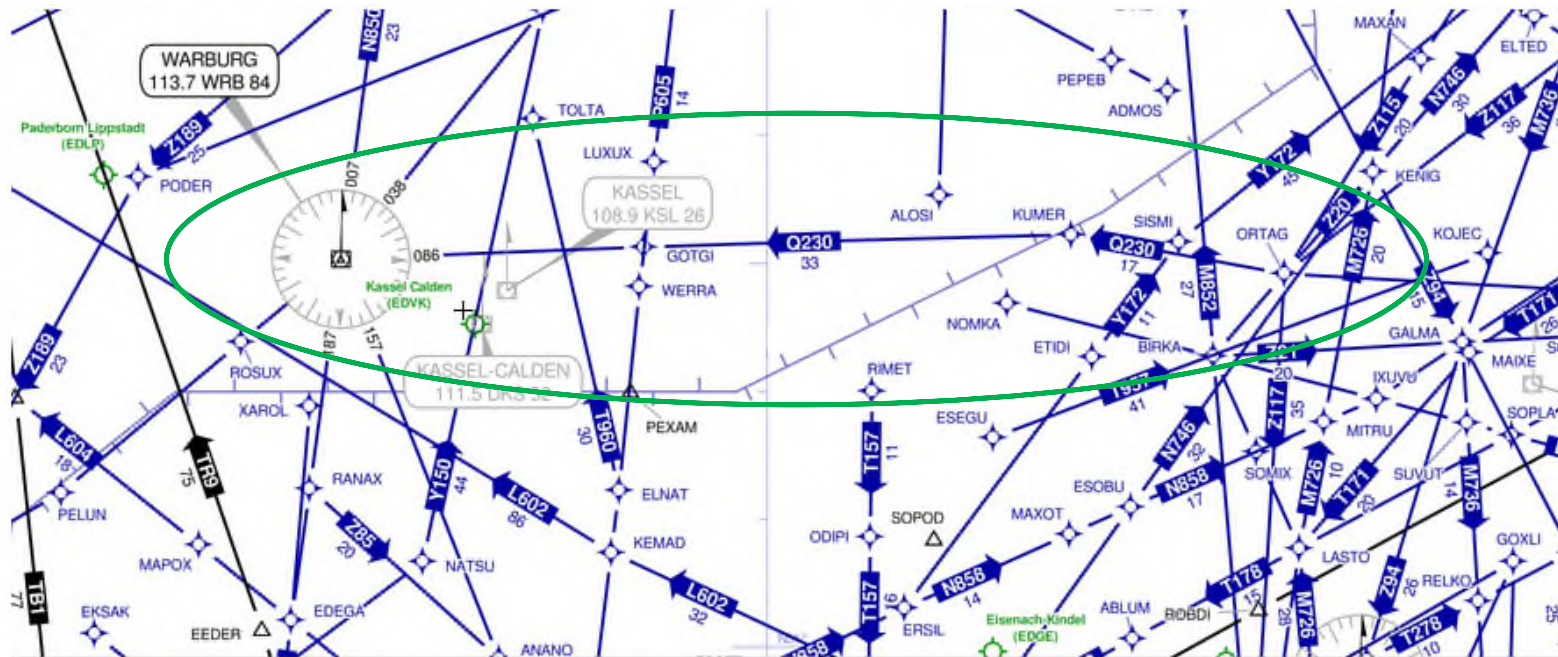
## Umbrellas?



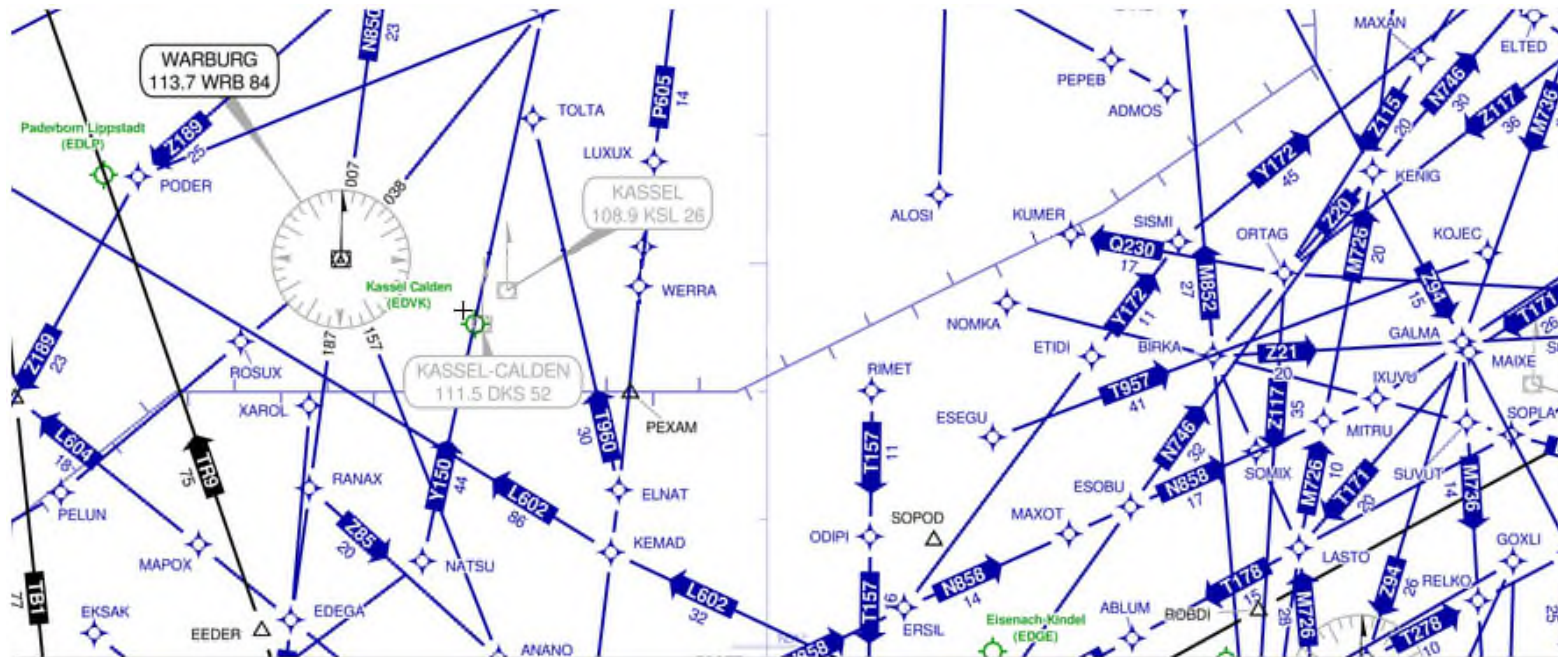
The sun is shining.  
Who needs an umbrella?



# An example from the past (The intention)

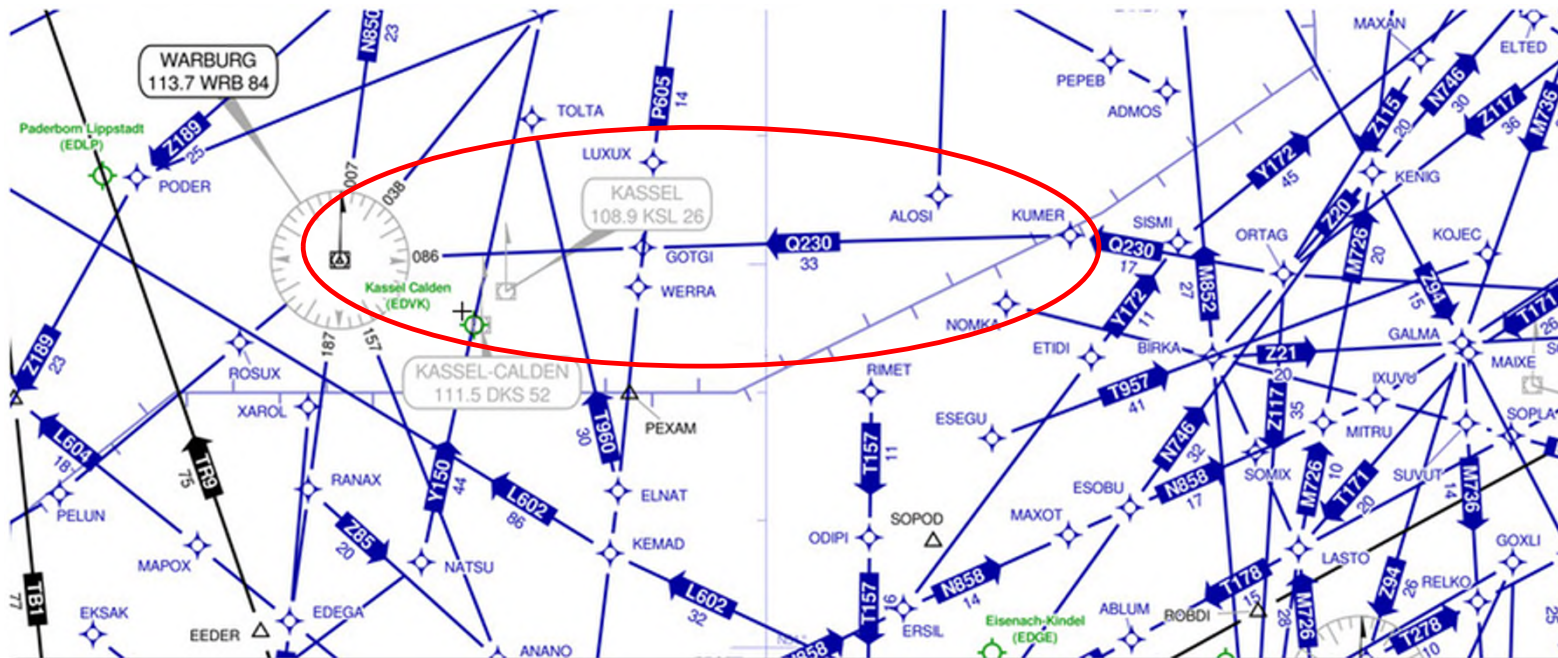


# An example from the past (The publication)





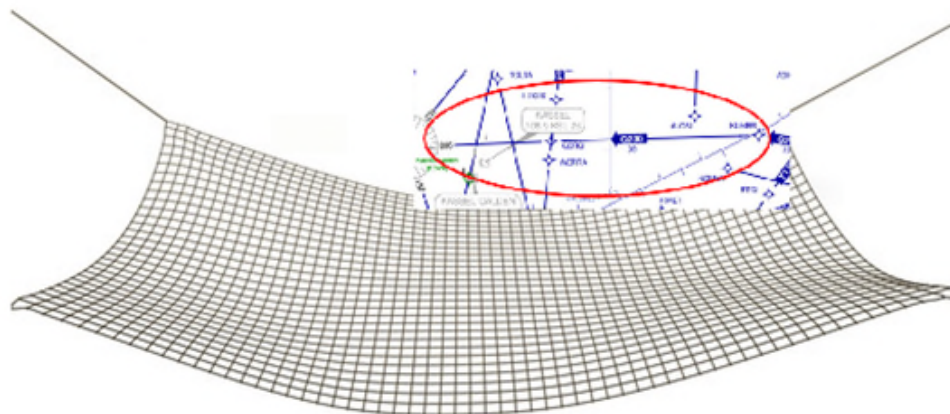
# An example from the past (The inconsistency)



## The umbrella facilitates the safety net



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## Specifications: What? (Data exchange (1))

The aeronautical information considered ATM relevant and subject to exchange:

- Airspace and airspace geometry information
- Significant points
- Navaids
- Route segment information
- Aerodrome information:
  - ICAO location indicator
  - ARP position
  - Aerodrome elevation
  - RWY direction
  - Procedures (SID/STAR/IAP)
- ATS Unit COM frequencies



## Specifications: When? Who? (Data exchange (2))

The exchange shall be accomplished as soon as it is sure that the information is reasonably consolidated, but not later than 64 days before AIRAC effective date.

- The reference date i.e. AIRAC – 64 days imposes a clear requirement on the data originators

The AISP originating the change shall be informed by the relevant receiving (neighbouring) AISP in case of inconsistencies detected there. The originating AISP shall then inform the data originator (e.g. Airspace designers) accordingly.

- Under normal circumstances the inconsistency will be resolved before the publication deadline



## Specifications: How? (Data exchange (3))

- The actual means of exchange, the points of contact, etc. are addressed in bilateral agreements between the signatory parties to the FABEC MIA MoU.
- This facilitates –
  - Accounting for specific ANSP (AISP) requirements;
  - Adaptations when required and without having to involve other parties;
  - Avoiding frequent changes to the FABEC AIM MoU which is intended as overarching reference document.





## The present state-of-affairs w.r.t. the ribs

| Border | Draft ready                       | Signed                            |
|--------|-----------------------------------|-----------------------------------|
| GE-NL  | Yes (action for LVNL)             | No                                |
| GE-BE  | Yes (action for DFS)              | No                                |
| GE-LU  | Yes (included in BE-LU agreement) | Yes (included in BE-LU agreement) |
| GE-FR  | Yes                               | Yes                               |
| GE-SW  | Yes                               | Yes                               |
| FR-BE  | Yes                               | Yes                               |
| FR-LU  | Yes (included in BE-LU agreement) | Yes (included in BE-LU agreement) |
| FR-SW  | Yes                               | Yes                               |
| BE-NL  | Yes (action for LVNL)             | No                                |
| BE-LU  | Yes                               | Yes                               |



## Mitigating inconsistencies (The starting point)

When we had completed our first assessment of cross-border inconsistencies in 2013, guess how many we had?

> 1200



## Mitigating inconsistencies (The definition)

Definition of the term inconsistency (in the FABEC AIM context):

- a) A difference between AIP and EAD;
  - b) Resident in AIP but not in EAD;
  - c) Resident in EAD but not in AIP;
  - d) More than one instance in EAD.
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- Further, not immediately captured by the definition but for practical reasons, purely comparing the AIPs: A difference in the textual description of the same item, omissions, etc.



# Mitigating inconsistencies (Examples)

Examples (derived from the Belgocontrol (skeyes) assessment of SEP 2017):

## Designated points

| Designator | ATS routes   |                                      | Also published in AIP | Description of the inconsistency        | Escalation/mitigation proposal                        |
|------------|--------------|--------------------------------------|-----------------------|---|---|
|            | Own AIP (EB) | Other AIP (country code in Column D) |                       |   |   |
| IBESA      | T853, UT853  | T853; T860                           | ED                    | Difference in coordinates between AIP's | Adapt EB AIP, point +/- on border with ED coordinates |
| DINAN      | UM170, UY157 | nil                                  | LF                    | ref to route missing AIP LF             | Point in EB FIR, reference to routes should be added  |
| GIRVI      | DCT          | nil                                  | LF                    | ref to route missing AIP LF             | Boundary point, reference to DCT should be added      |

## Airspace

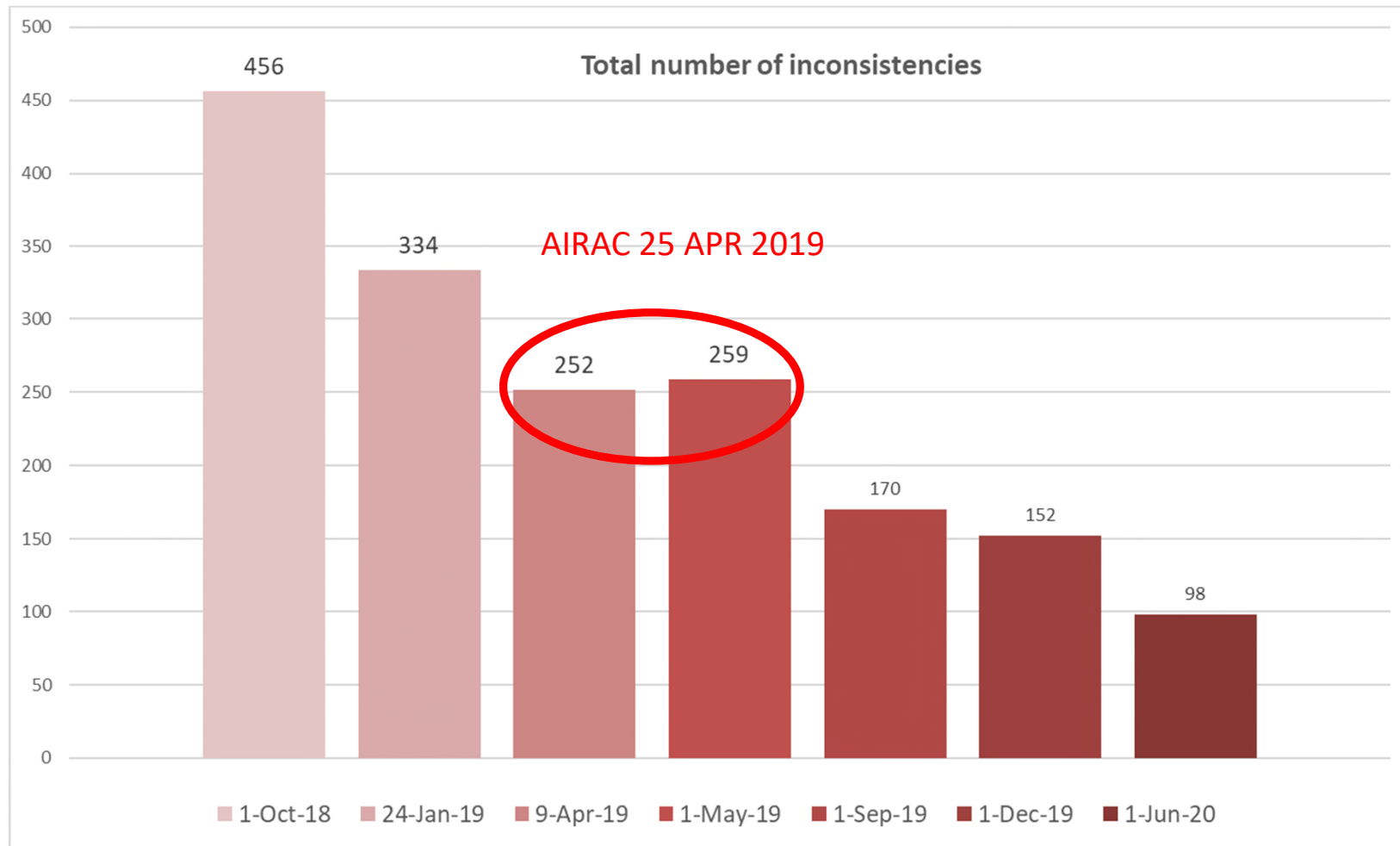
| Airspace name            | EAD Identifier                            | Also published in AIP | Description of the inconsistency                 | Escalation/mitigation proposal                  |
|--------------------------|---|-----------------------|--|---|
| BRUSSELS CTA EAST FOUR A | EBEAST4A-2                                | EH                    | Small coordinates mistake between EAD and EH AIP | EAD coordinates to be corrected by Belgocontrol |
| EHBK CTR                 | EHBK2, airspace type PART                 | EH                    | Should be published in EB AIP                    | Should be published in EB AIP                   |
| EHBK TMA ONE             | EHBK1-2 and EHBK1-3, airspace type : PART | EH                    | Not correctly published in EB AIP                | Should be corrected in EB AIP                   |

## Routes

| Route identifier | Route segment(s)                | Also published in AIP | Description of the inconsistency   | Escalation/mitigation proposal   |
|------------------|---------------------------------|-----------------------|--|--|
| (U)Z717          | Maastricht VOR/DME (MAS)- GOBNO | EH                    | 1 DEG difference in MAG track. EH AIP: Control unit Brussels ACC missing | Coordinate MAG track; Correct EB or EH AIP accordingly; add Controlling unit in the remark |
| BENE ONE         |                                 | EH MIL                | Not in EAD   | Coordinate with EH MIL; add to EAD   |

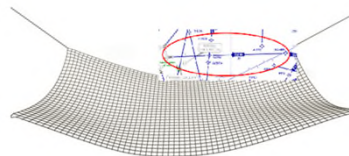


# Mitigating inconsistencies (The evolution)



## FABEC AIM: The present state-of-affairs

- Resolving existing inconsistencies remains paramount.
- New inconsistencies shall be avoided.
- The establishment of the FABEC MIA MoU, facilitating the corresponding bilateral agreements, has proven essential because an active role is assigned to AIS (AIM).



## Conclusions and recommendations

- The arrangement permits the AISPs to assist in and to safeguard, validated and coordinated requests for publication of aeronautical information.
- The establishment of such arrangements between other ANSPs and/or between FABs is essential.
- Start working on detection and mitigation of existing inconsistencies
- Identify systemic issues – and start thinking on how to address them

