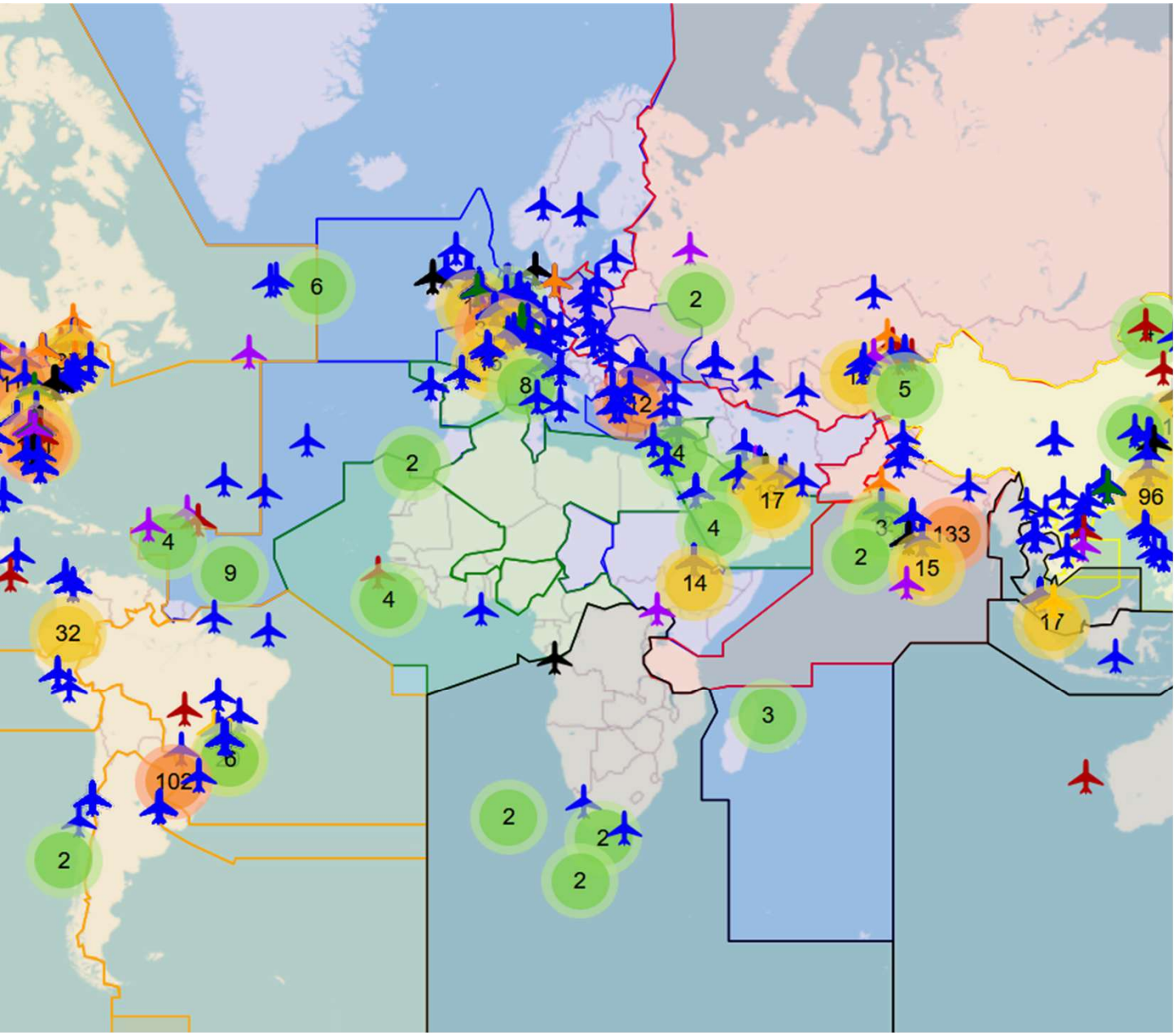
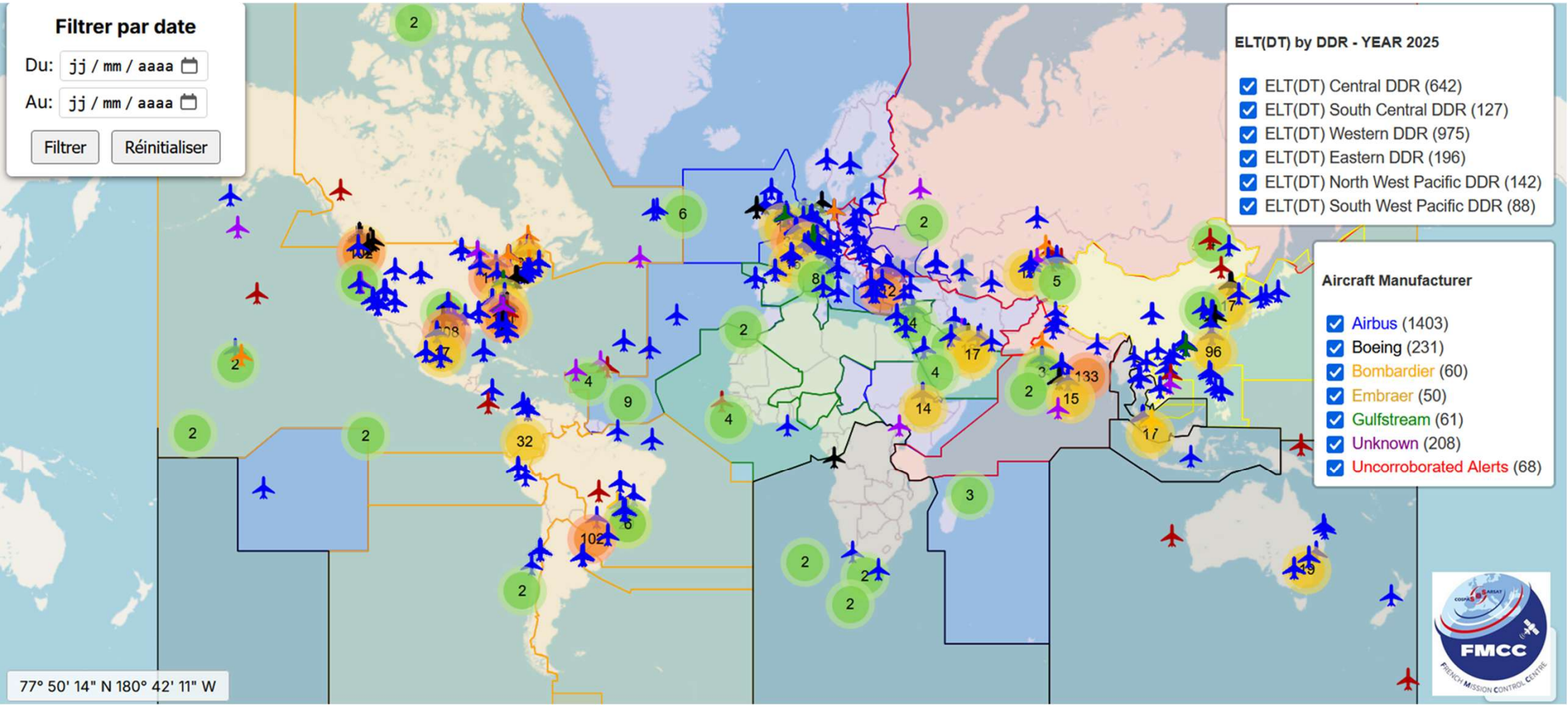


ELT(DT) / ADT
Non-Distress Activations

DIRECTION GENERALE DE L'AVIATION CIVILE
SEARCH AND RESCUE

Arnaud PHILIPPE

Worldwide ELT(DT) Activations



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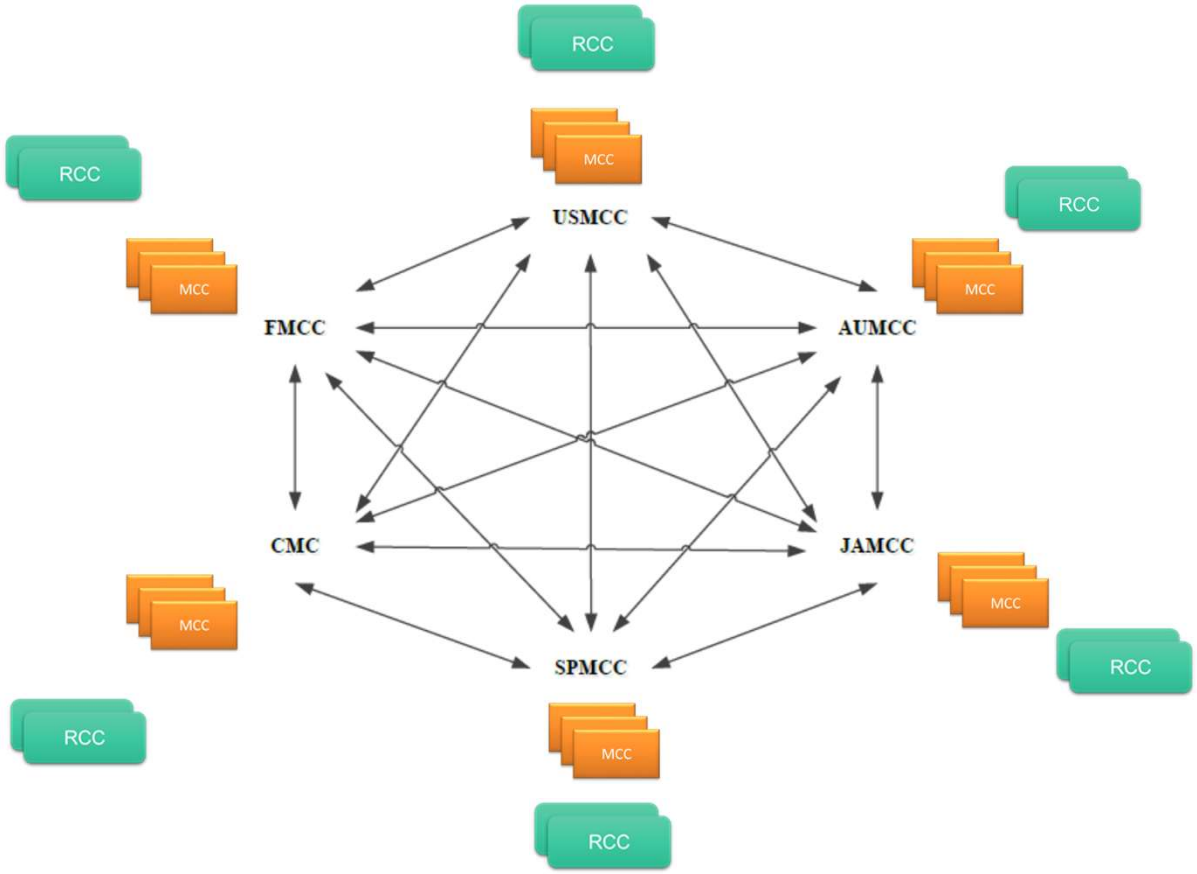
Distribution of distress alerts

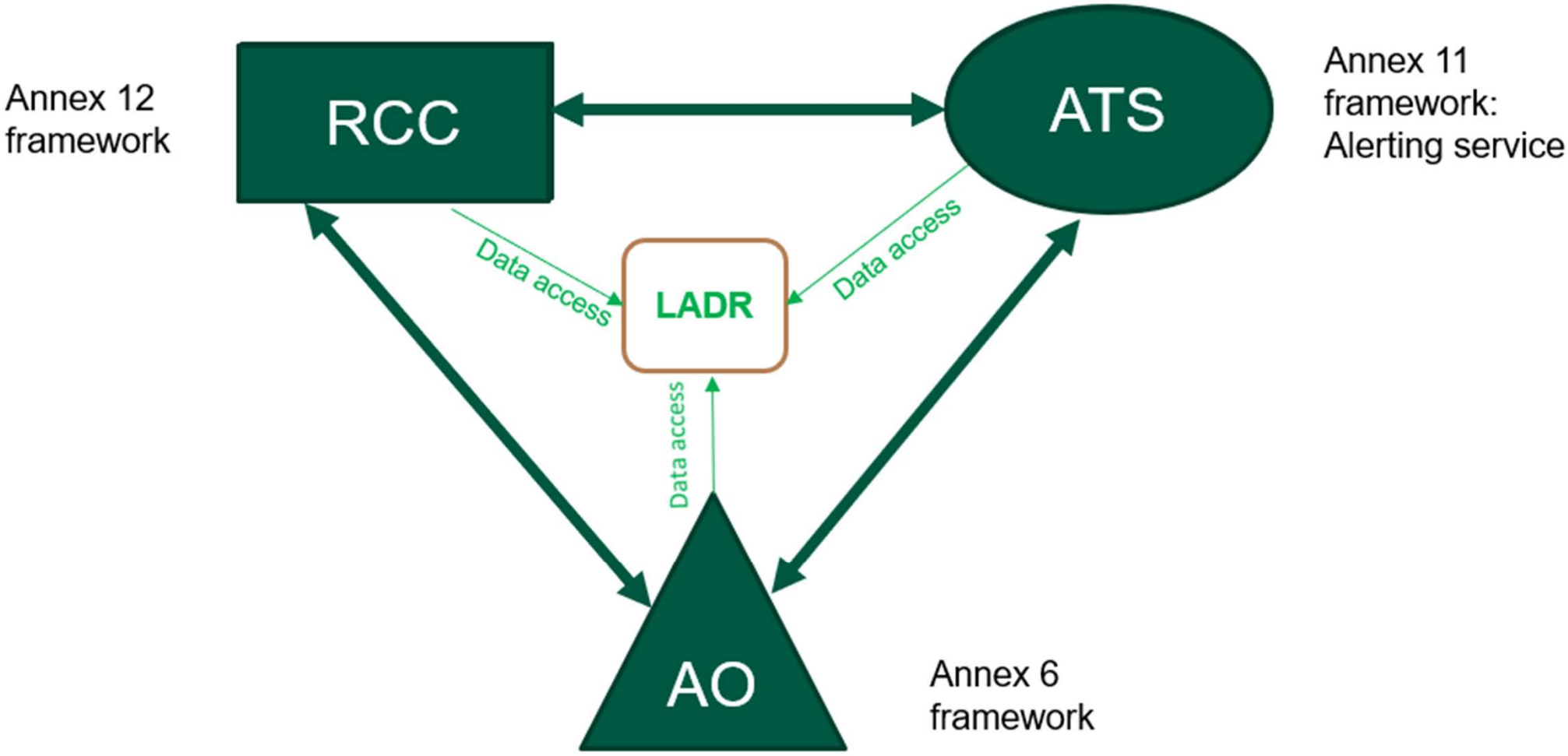
Cospas- Sarsat Organization



FMCC → LADR

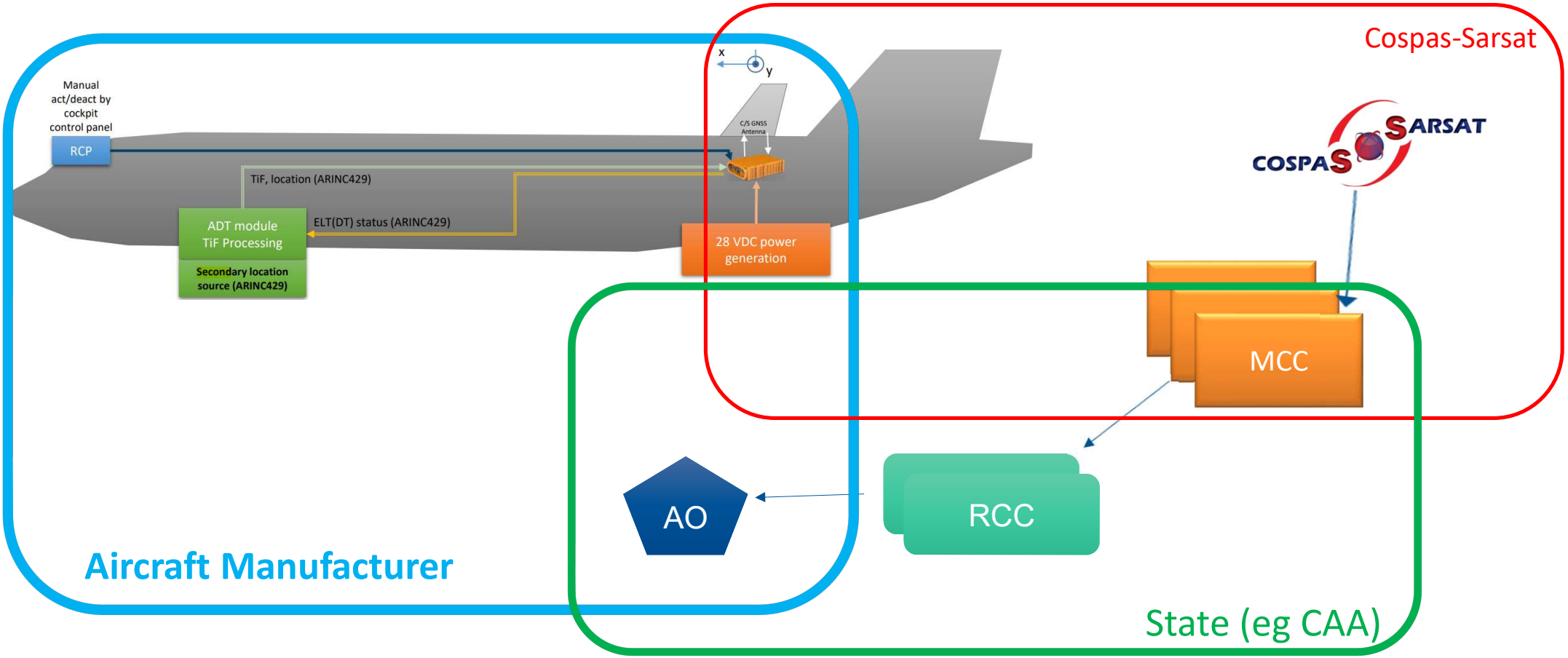
- FMCC distributes ADT data to the LADR for the Cospas-Sarsat system as of 1 october 2025.
- Each nodal MCC is to become a LADR contributor at a later stage.
- The distribution to the LADR is based on beacon country codes.

Cooperation / Coordination



Responsabilities

- The aircraft manufacturer is the **key stakeholder** as it is the integrator of the GADSS/ADT compliant solution
- The ELT(DT) is one element of the ADT solution



Data collection

Template of data collected by rhe FMCC

- Set of data collected by France at the FMCC level

FMCC ref	Timestamp (1st burst)	Beacon hexID	Beacon Country Code	Beacon Type	Identification	3LD	Manufacturer integrator	Aircraft Model	Registration Markings	Single packet	Zone

Cancellation	Confirmed cancellation timestamp	Result	d feedback f	Duration (min)	Number of Burst	First activation type	Time of first activation	Second Activation	Time second activation	Third Activation	Time third activation

first refined GNSS	Altitude / EHE	Type DOA COARSE refined	Time at First Position	Last Position	Altitude / EHE	Type DOA COARSE refined	Time Last PSN	Airport	Ground or inflight	feedback from integrator

ELT(DT) Activations

What to do with the collected data?

Make it available to relevant stakeholders

- **Aircraft Manufacturer** → ***Aircraft ICAO 24 bits***
- **National authority** → ***Beacon country code of registration***
- **Aircraft Operator** → ***3 Letter-Designator***
- **Others** **if deemed necessary..**

- **IDENTIFY ROOT CAUSES and apply appropriate measures**

ELT(DT) Activations

What to do with the collected data?

Make it available to the <u>key</u> stakeholder

- **Aircraft Manufacturer** → ***Aircraft ICAO 24 bits***

Objective :

- Provide the aircraft manufacturers with worldwide activations :

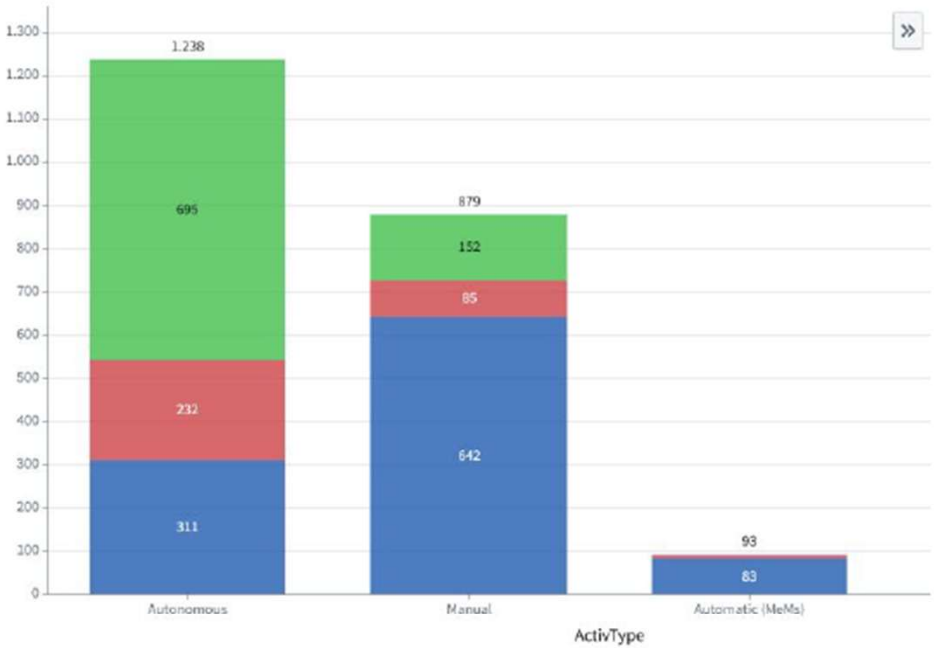
Every activations have to be analysed by the integrator :

- Liaison with suppliers → identify technical operational required actions
- Liaison with customers → Mitigation actions such as dedicated workshops, etc.

FMCC ⟷ AIRBUS

- **IDENTIFY ROOT CAUSES and apply appropriate measures**

Airbus Commercial inadvertent ADT activations lessons learned



Autonomous (ADT) activations

Linked to an insufficient robustness of the Enabling/Disabling logics in hosts, leading to activations on ground

⇒ Corrections in host defined, under deployment on one aircraft type proving successful, and to go on at next opportunity on others

Manual activations

Linked to a combination of ADT novelties, maintenance issues, side effects of other activation types, ADT components perfectible design, …

⇒ Communication to users enhanced, maintenance instructions and training improved / ELT-DT and Remote Control slight improvements to come

Automatic (acceleration sensor) activations

Linked to a particular issue of the ELT accelerometer component, affecting essentially one aircraft type

⇒ Correction in ELT defined, to be developed

Summary and main outcome

- **Still almost all unintended transmissions started on ground**
  → Core distress detection logic in flight is robust and working as per intention

- **Dashboard for In-Service in flight ELT-DT activation is in place**
  → Review of in-service data is continued and occurrence are immediately addressed

- **Amount of unintended activation per unit in service is globally decreasing**
  → Peak in December 2024 for Autonomous and Manual, but back to usual in January 2025

- **Reduction of inadvertent Autonomous activations**
  → For all three programs Airbus is working on ADT Host update to improve the Enabling/Disabling logic of the ELT-DT system on ground, **first implementation shows positive results in avoiding activations, similar implementations to come for other programs**

AIRBUS

ELT(DT) Activations

What can be done at State Level ?

The same process of dealing with legacy ELT can be applied
→ The State already has everything to get in touch with the relevant stakeholders

- ***Aircraft ICAO 24 bits →***

  Identify the country responsible for issueing the ICAO 24bits Address

- ***Notification Of Country Registration, NOCR →***

  the designated SPOC
  receives a "NOCR SIT 185" for worldwide events associated with their country code.

- ***3 Letter-Designator →***

*Once an event is identified to belong to a State, the 3LD can help identifying the **Aircraft operator**.*
*This information is also included in the **national beacon registry** or the **IBRD** provided taht the beacon is registered.*

- **HELP IDENTIFY ROOT CAUSES and apply appropriate measures**

Importance of activation data

Airframer point of view

- To perform an effective assessment of a activation event the associated data all along them (total duration, accurate date/times, locations, activation type(s), beacon code) is essential
- Despite the already established communication path between airframer and operator, there is also the need to get the feedback from the end user of the distress data to enhance the performance (good or perfectible)
- Due to strong impact of the aircraft systems on the autonomous activation rate, it is not sufficient to provide feedback to the equipment manufacturers only

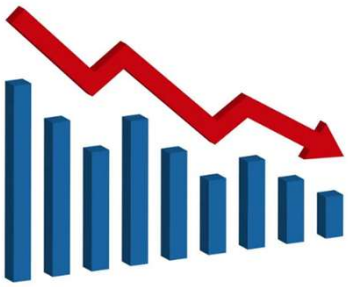
➔ Thanks to the close cooperation with Cospas-Sarsat, the FMCC and the data that is shared, Airbus was in the position to build statistics on inadvertent activations that are helping to further dig into the areas of concern for root cause analysis, with the support of its suppliers.

➔ Without this, airframers would not be in a position to improve the situation, incl. informing operators from their side.

Feedback to airframers on activations is essential!

AIRBUS

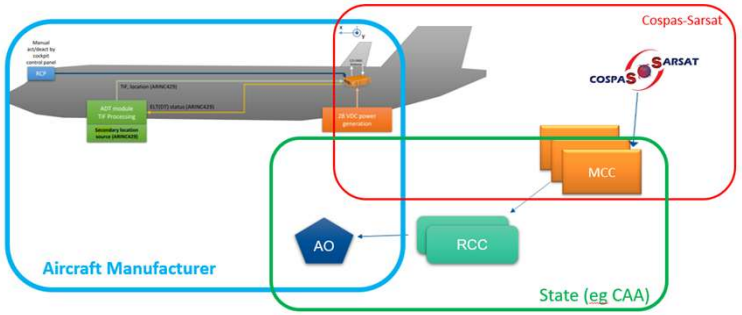
Outcomes : ELT(DT) Non distress Activations



- Number of non-distress activation decreases in France, especially in Final Assembly lines.
- **Vast majority of root causes are identified**

Challenges :

- Need involvement of every stakeholders.
- Need detailed feedback from RCCs and/or States (e.g. Airworthiness Authority)
- Need a dual approach towards **Airframers** and at **national** level



Objective :

- **Facilitate the identification of the root cause and then take appropriate actions**

Additional Information

AirbusWorld Platform:

- ISI 31.00.00028 Title: Getting to grips with Autonomous Distress Tracking System
- ISI 31.39.00006 Title: ELT-DT inadvertent activations Webinar (including the webinar presentation and the Q&As)

- TFU 31.39.00005 Title: ELT-DT inadvertent activations

EASA SIB on ELT(DT):

EASA SIB No.: 2025-02

EASA
European Union Aviation Safety Agency

Safety Information Bulletin
Operations
SIB No.: 2025-02
Issued: 10 April 2025

Subject: **Nuisance Alerts from Distress Tracking Systems**

Ref. Publications:
- ICAO Annex 6 - Operation Of Aircraft - Part I, 12th Edition dated July 2022.
- Commission Regulation (EU) No 965/2012 dated 5 October 2012.
- Regulation (EU) 376/2014 dated 3 April 2014.
- Commission Implementing Regulation (EU) 2015/1018 of 29 June 2015.
- EASA Certification Specifications for Airborne Communications, Navigation and Surveillance (CS-ACNS) Issue 5 dated 24 April 2024.

THANK YOU FOR YOUR ATTENTION

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