

# ICAO GADSS Workshop

## Airline Preparations for ADT

**John Moore**

Safety & Flight Operations

IATA, Asia-Pacific

23 May 2022



# Our understanding:

- Airspace Users are responsible for distress tracking, but nothing prevents that responsibility from being delegated to COSPAS-SARSAT or similar service
- The ELT(DT) distress tracking message will be sent to the LADR (Location of Aircraft in Distress Repository) by the monitoring service
- Airlines and SAR agencies will subscribe to that repository using some criteria such as:  
*Tell me each time there is a distress message for one of my aircraft or within my area of jurisdiction.*
- They can then be alerted that something is happening.



# Our understanding:

- Airlines will need to verify with the monitoring service that the distress position report will be sent to the LADR while at the same time subscribe to it to have access.
- So when a distress situation arises, airlines will receive a message from the LADR (and also maybe a direct message from the pilot), they can then access it to find out more.
- It is then business as usual: trying to contact the aircraft and liaise with ATC, as it is still an ATC responsibility to declare a distress phase.
- The LADR is being developed and operated by Eurocontrol on behalf of ICAO



# IOSA Standards Manual, Ed 14, Sept 2021

**Table 4.11—Required Aircraft Systems and Equipment**

As specified in [MNT 1.9.1](#), aircraft in the Operator's fleet shall be equipped with, in accordance with conditions of applicability, the systems and equipment specified in this table. Where referenced, refer to guidance material in [Table 4.12](#) or [Table 4.13](#).

(xxx)	Autonomous distress position transmission system	Aircraft of a maximum certificated takeoff mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2021.	<p>A system that autonomously transmits information from which aircraft position can be determined by the Operator at least once every minute when in distress and:</p> <ul style="list-style-type: none"> <li>(a) Automatically activates transmission of position information when the aircraft is sensed to be in distress;</li> <li>(b) Has a means for information transmission to be activated manually;</li> <li>(c) Transmits information that contains a time stamp;</li> <li>(d) In the event aircraft electrical power is lost, transmits position information for at least the expected duration of the entire flight.</li> </ul> <p><b>(GM)</b> See <a href="#">Table 4.12</a> (xxx)</p>	<p>▲ An operator may conform to <a href="#">Table 4.11</a> (xxx) through Active Implementation as long as the implementation Action Plan (IAP) projects conformance on or before 1 January 2023.</p>
-------	--	---	---	--

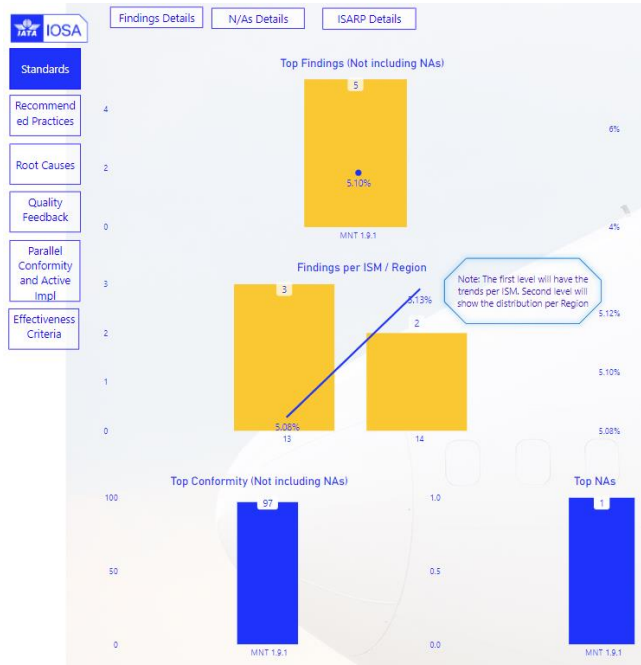
Per Table 4.12:

An aircraft is in a distress condition when it is in a state that, if the aircraft behavior event is left uncorrected, can result in an accident.

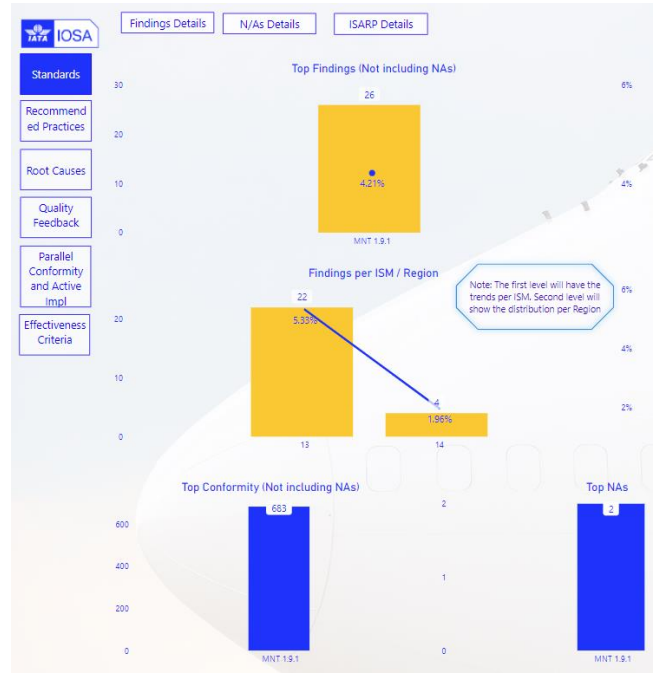
Examples of aircraft behavior events that could activate distress information transmission include, but are not limited to, unusual attitudes, unusual speed conditions, collision with terrain and total loss of thrust/propulsion on all engines and ground proximity warnings.



# IOSA (ASPAC vs Global)



Comparing IOSA Audits against ISM v13 and v14 in the period 2019 – 2022

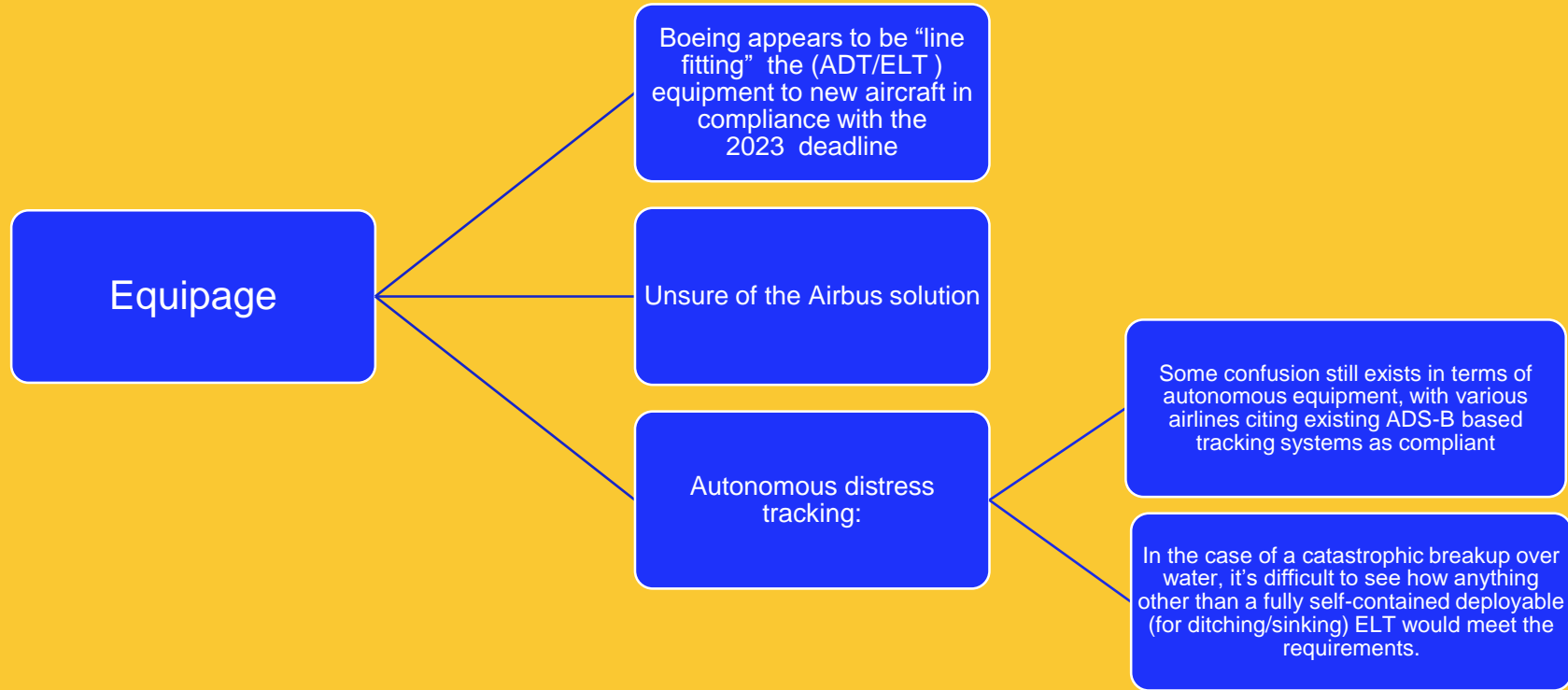


**ASPAC:**  
103 audits, no findings against ADT

**Global:**  
707 audits, no findings against ADT



# Airline feedback:



# Airline feedback:

## Data Repository

- The ICAO LADR concept appears to tick all boxes In terms of data collection and distribution of messages among ANSP/AO/SAR
- Technical rollout / training / procedures might prove to be a challenge given the proposed timeline



# Airline feedback:

## Next Steps

- Subject to manufacturer input, a delay or mandate to fit D-ELT to new aircraft only might be sensible, considering that there exists now ADS-B position reports every 1-2 minutes even in remote areas
- Consideration could also be given to area of operation, for example non-EDTO aircraft might be excluded from the requirement initially



# Airline feedback:



- On the aircraft technology side, the airline has specified fitment of the required ADT systems to new aircraft in support of the 2023 forward fit requirement
- On the ground side the airline is aware of the COSPAS/SARSAT system solution for receiving the ADT signals from the aircraft, and sending to the LADR system
- The airline is still assessing contracting with the LADR provider for the service

# Airline feedback:



- Yet to fully understand the exact procedural and notification requirements placed on an operator should the airline encounter an aircraft in distress
- Currently researching the requirements for operators, and what procedures and training we will be required to put in place.

# Confirmation required:



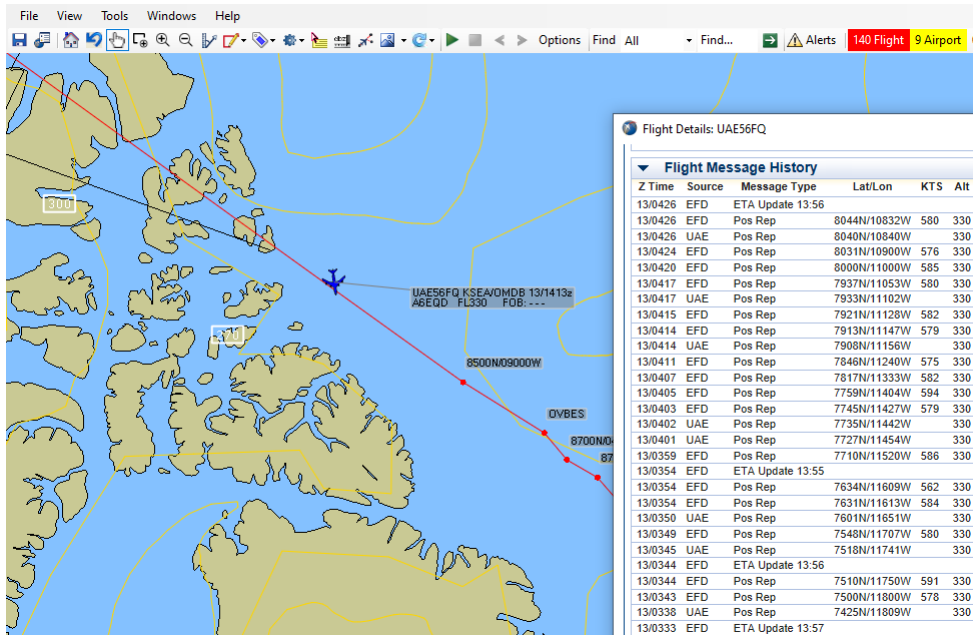
- Require clear and standard airline actions prescribed for when an aircraft is identified as in distress
- This would include a defined information set that is required to be conveyed when an airline informs a third party that an aircraft is in distress
- Require contact details for all necessary parties
- Require confirmation that any global contact list is maintained always so that calls or emails will be reliably received and actioned
- How will airlines be notified of outages to the data repository (LADR)?



# GADSS Progress Airline View 23 May 2022

Guido Knigge – Manager Flt Dispatch

# AT - 4D/15



- Well described and understood.
- Already state of the art at the time of implementation.
- No changes to aircraft hardware.
- Adopted by regulator (CAR OPS 1.195).

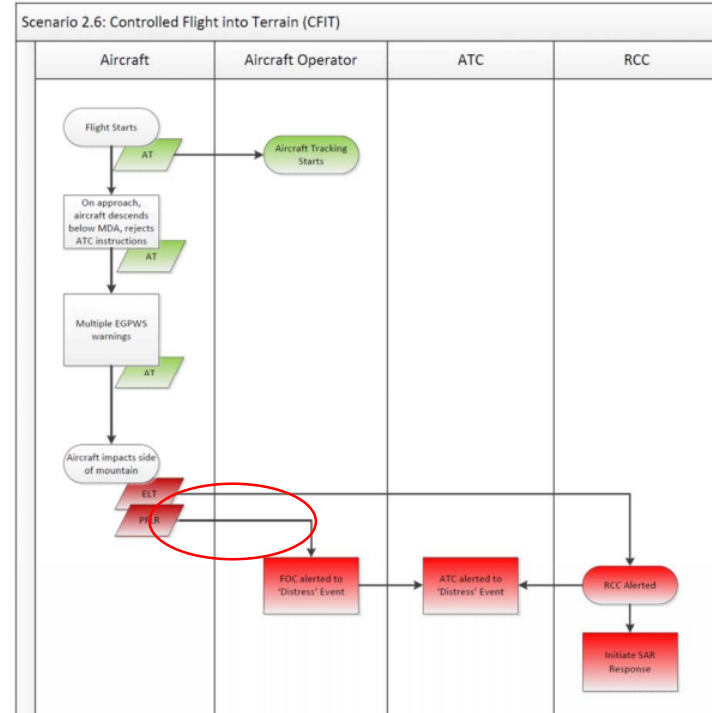
# ADT – 01.Jan.2023

- Regulator has not shown its cards yet.
- Limited engagement or guidance.
- Does not naturally integrate with normal tracking.
- OEMs have only just 406Mhz ELT plans.
- One of the results...



# COSPAS-SARSAT and LADR

- The concept has merit. But it does not solve all scenarios as per the GADSS concept document.
- As per ICAO, responsibility for ALL tracking rests with the operator.
- To be clear: We prefer a holistic solution, but the picture is not yet complete.



01.Jan.2023 will be a major challenge.  
I hope this workshop clarifies the way forward.

THANK YOU

**Thank you.**

