



ICAO

SAFETY

NO COUNTRY LEFT BEHIND



Global Update - GADSS

Mike Barton

ICAO SAR Technical Expert

APAC SAR Workshop – Aug 2016





ICAO

SAFETY

NO COUNTRY LEFT BEHIND



TOPICS

- Where are we
- Where are we going
- How are we planning to get there





Implementing GADSS

**Normal Aircraft
Tracking SL**

AN 11/1.1.29-15/12

Aircraft
Tracking
Normal
Operations

Aircraft
Tracking
Abnormal
Operations

Autonomous
Distress
Tracking

Retrieval of
CVR and
FDR Data

**Carriage requirements of
flight recorders SL**

SP 55/4-15/15



Normal Tracking SARPs

Performance-based Standards and recommended practices for normal flight tracking

- No change to ATC procedures
- Not technology-specific
- Establish operator responsibility to track
- Recommendation to track where ATC gets position information at more than every 15 min
 - 27 000 Kg and more than 19 Seats
- Standard to track in oceanic areas where ATC gets position information at more than every 15 min
 - 45 500 Kg and more than 19 Seats
- Data retention for last aircraft location purposes

Timelines

✓ January 2015

- ✓ Preliminary review by ICAO ANC

✓ March 2015

- ✓ State Letter

✓ October 2015

- ✓ Final review by ICAO ANC

✓ November 2015

- ✓ Adopt

✓ March 2017

- ✓ Effective

November 2018

Applicable



ICAO

SAFETY

NO COUNTRY LEFT BEHIND



Graphical Representation

Requirement
to track

Recommendation
to track at 15
minute intervals

Requirement to
track at 15 minute
intervals





ICAO

SAFETY

NO COUNTRY LEFT BEHIND



Normal Tracking Complementary Work

- NATII identified the need for additional provisions
 - Complementary risk-based SARP
 - SL to be issued soon
 - Applicability 2018
 - Guidance material being developed
 - Expected publication (July 2017)
 - Worldwide directories
 - International operators (expansion of Doc 8585 data set)
 - ANSPs (expansion of Doc 7910 data set)
 - ANSP 4D/15 Service coverage



ICAO

SAFETY

NO COUNTRY LEFT BEHIND

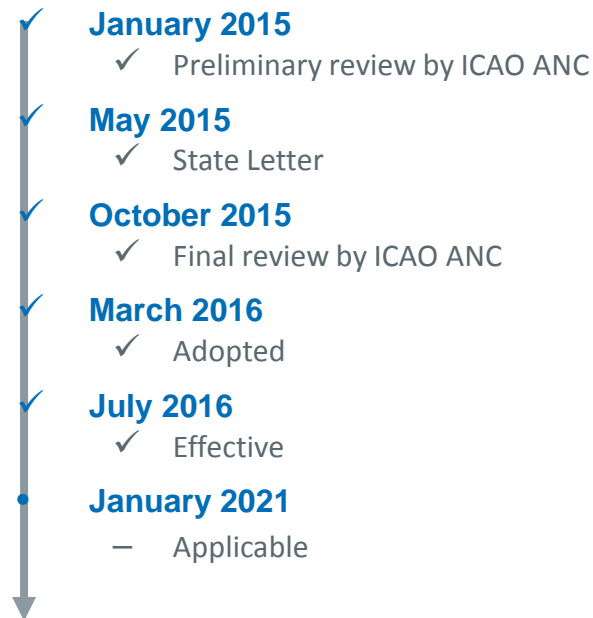


Distress Tracking SARPs

Performance-based Standards and recommended practices for distress flight tracking

Timelines

- Not technology-specific
- Location of an accident site within 6 NM
- Active
 - On flight behaviors that can lead to an accident
 - Manually from the air
- Power and position information autonomous from other a/c systems
- Applies to new Aeroplanes from 2021
- Incentive for early adoption as an alternative to second ELT



DISTRESS TRACKING

- Automatic
- Manual

AUTONOMOUS

Aircraft behavior event
that if left uncorrected,
can result in an
accident.

Squawk at
one minute intervals

6 NM

RESCUE COORDINATION CENTER

Adopted SARP



Local User
Terminal



Mission
Control
Center



Rescue
Coordination
Center
4D/1 Position
information
Rescue
Coordination
Center



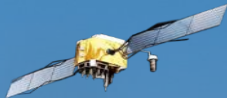
DISTRESS TRACKING



→ Automatic
→ Manual

AUTONOMOUS

**Distress Tracking Concept
GADSS CONCEPT**



Other
Satellites



DISTRESS TRACKING



→ Automatic
→ Manual

AUTONOMOUS

Rescue
Coordination
4D/1 Position
information
Center

Rescue
Coordination
Center

Ground
Station



Control
Center



Mission
Control
Center



ATC

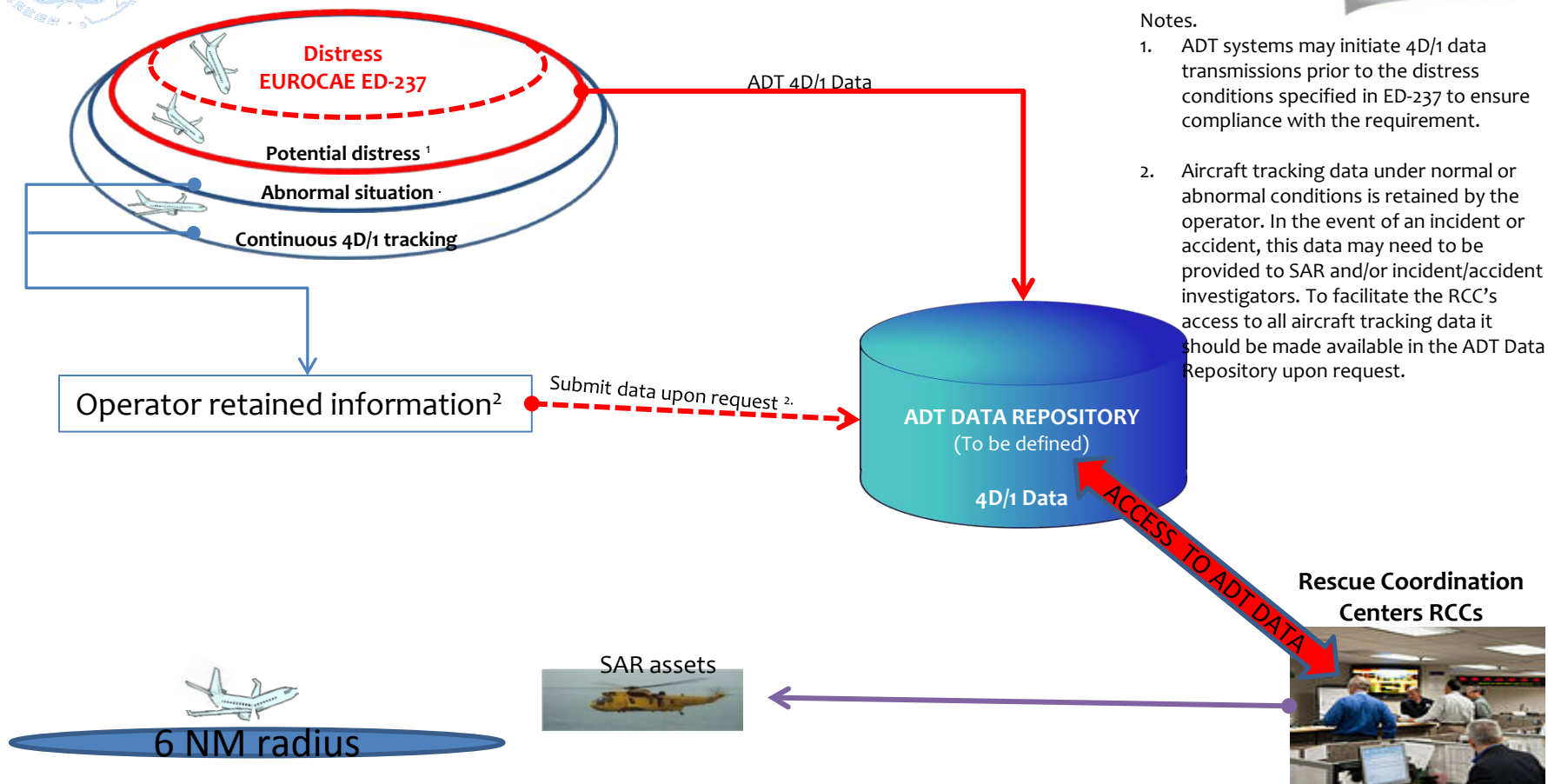


**Distress Tracking Concept
GADSS CONCEPT**



ADT DATA RETENTION LOCATION AND ACCESS

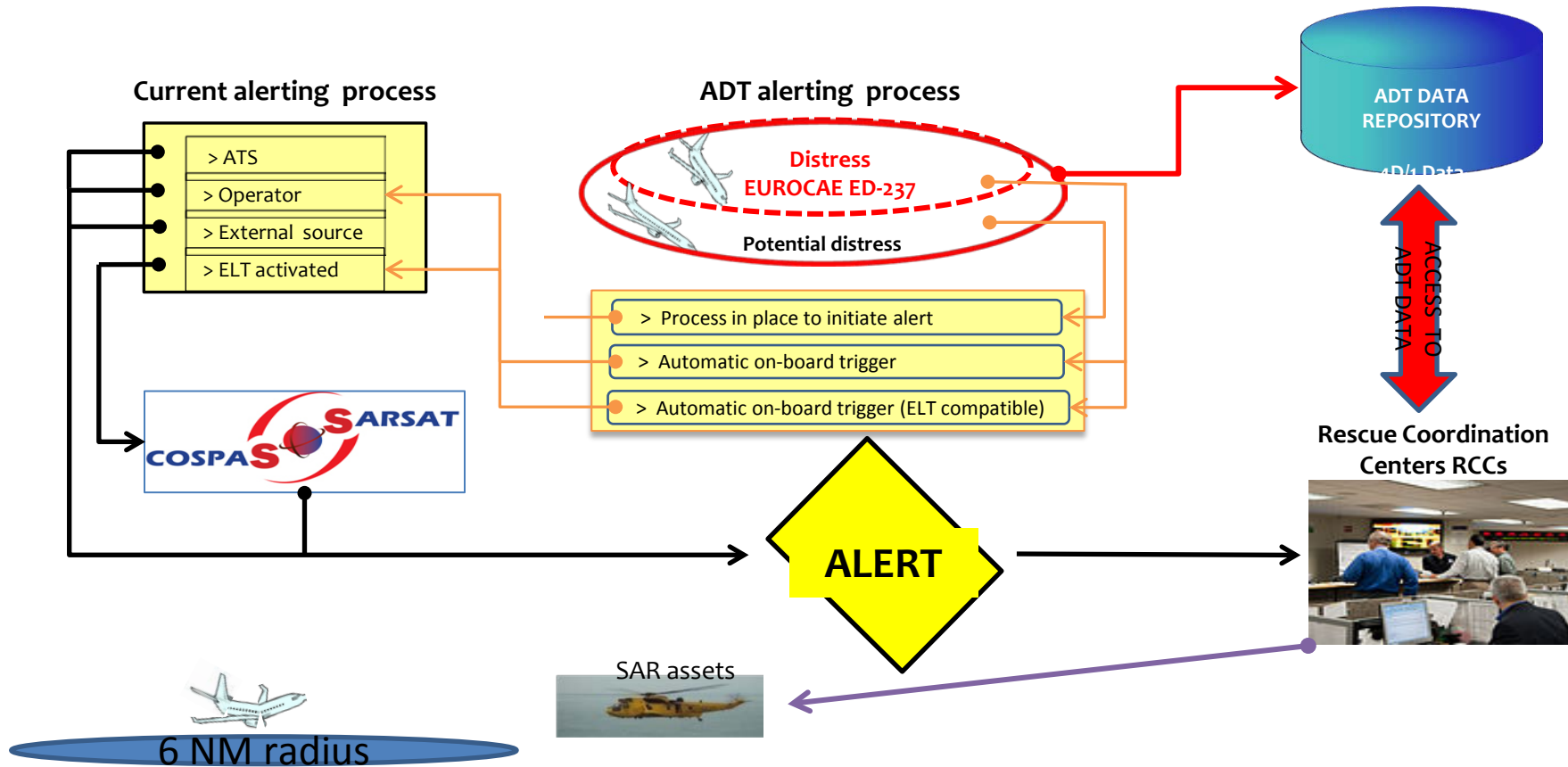
Work in Progress





ADT DISTRESS ALERTING

Work in Progress





What to Expect

- GADSS Advisory Group
 - Updating the CONOPS
 - SL comments and suggestions
 - Latest developments in technology
 - Identification additional provisions
 - Other Annexes
 - PANS
 - Next version of GADSS (Ver 6.0)
 - Expected to be published end of 2016



ICAO

SAFETY

NO COUNTRY LEFT BEHIND



ICAO

North American
Central American
and Caribbean
[NACC] Office
Mexico City

South American
[SAM] Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
[WACAF] Office
Dakar

European and
North Atlantic
[EUR/NAT] Office
Paris

Middle East
[MID] Office
Cairo

Eastern and
Southern African
[ESAF] Office
Nairobi

Asia and Pacific
[APAC] Sub-office
Beijing

Asia and Pacific
[APAC] Office
Bangkok



THANK YOU