



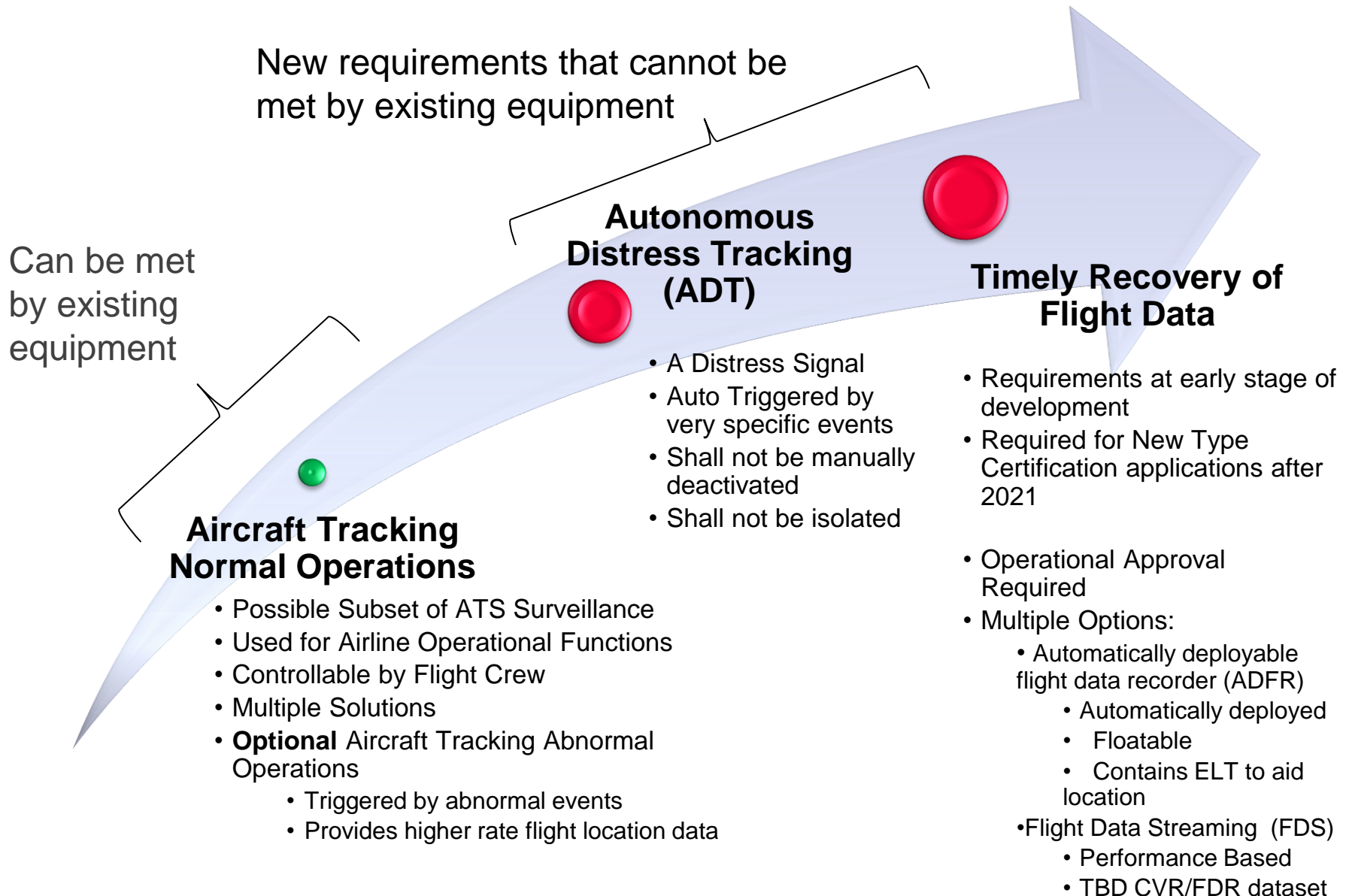
Autonomous Distress Tracking (ADT) and Timely Recovery of Flight Data (TRFD)

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AEEC Systems Architecture and Interfaces (SAI) Meeting

October 11-12, 2016

Global Aeronautical Distress and Safety System (GADSS – ICAO)



Regulatory Situation

- **ICAO Air Navigation Commission** has approved pending Annex 6 changes for ELT, Distress Tracking, and Data Recovery in March 2016.
 - Normal Tracking – November 8, 2018 (all aircraft)
 - Autonomous Distress Tracking (ADT) - Jan. 1, 2021 (Forward-Fit Only)
 - Fixed Emergency Locator Transmitter (ELT) not required if equipped with ADT.
 - Automatically Deployable Flight Data Recorder (ADFR) requirement modified. Now states that new type certs (applications for type cert submitted after Jan. 1, 2021) “shall be equipped with a means approved by the State of the Operator, to recover flight recorder data and make it available in a timely manner.”
- **The European Commission** has published Commission Regulation (EU) 2015/2338 (amendment to Annex I of Regulation (EU) No. 965/2012) on flight recorders, underwater locating devices, and aircraft tracking systems and released Draft Acceptable Means of Compliance (AMC) and Guidance Material (GM) for a “focused” consultation.
 - Requirements are similar to ICAO. Following are significant differences:
 - Normal Tracking: All other previously equipped airplanes must perform normal tracking (no retrofit). After 2021 Reporting rate increases to 3 min. unless equipped for distress tracking
 - Distress Tracking: Accuracy increases to 3 nautical miles after 2023.
 - Low Frequency-Underwater Location Devices (FL-ULD): not required if equipped with Autonomous Distress Tracking

Autonomous Distress Tracking (ADT) APIM

- Target APIM approval at the April 2017 AEEC General Session
- Phase 1 – Requirements Capture (3 months: May-July 2017)
- Phase 2 - Develop Candidate Architectures that meet the requirements (6 months: Aug. 2017 – Feb. 2018)
- Phase 3 - Choose an architecture(s) in which to develop detailed equipment and aircraft installation requirements (9 months: Mar. 2018 – Jan. 2019)
- Propose that work is accomplished within the SAI Subcommittee

Timely Recovery of Flight Data (TRFD) APIM

- Target APIM approval at the April 2017 AEEC General Session
- Phase 1 – Requirements Capture (6 months: June-Dec. 2018)
- Phase 2 - Develop Candidate Architectures that meet the requirements (12 months: Jan. 2019 – Dec. 2019)
- Phase 3 - Choose an architecture(s) in which to develop detailed equipment and aircraft installation requirements (13 months: Jan. 2020 – Jan. 2021)
- Propose that work is accomplished within the SAI Subcommittee

Summary

- Aircraft mandates for Autonomous Distress Tracking (ADT) are on the horizon.
- Aircraft design changes will be needed for new aircraft designs to meet new flight data recovery certification requirements
- We must partner together to provide industry-harmonized, optimum solutions!

SAI Subcommittee Timeline

Autonomous Distress Tracking (ADT)

Activity	Mtgs	Mtg-Days (Total)	Expected Start Date	Expected Completion Date
Phase 1: Document the end-to-end system requirements	One 2-day meeting plus teleconferences	2	May 2017	July 2017
Phase 2: Develop candidate architectures, and select architecture(s)	Three 3-day meetings plus teleconferences	9	August 2017	Feb. 2018
Phase 3: Develop detailed equipment, interface, and aircraft installation requirements, as well as ground system requirements	Three 3 day meetings plus teleconferences	9	March 2018	Jan. 2019

▼ Concurrent with scheduled SAI meetings (Feb, June, Oct)

▼ Working meeting separate from normally scheduled SAI meetings

