

FAA TSO Update

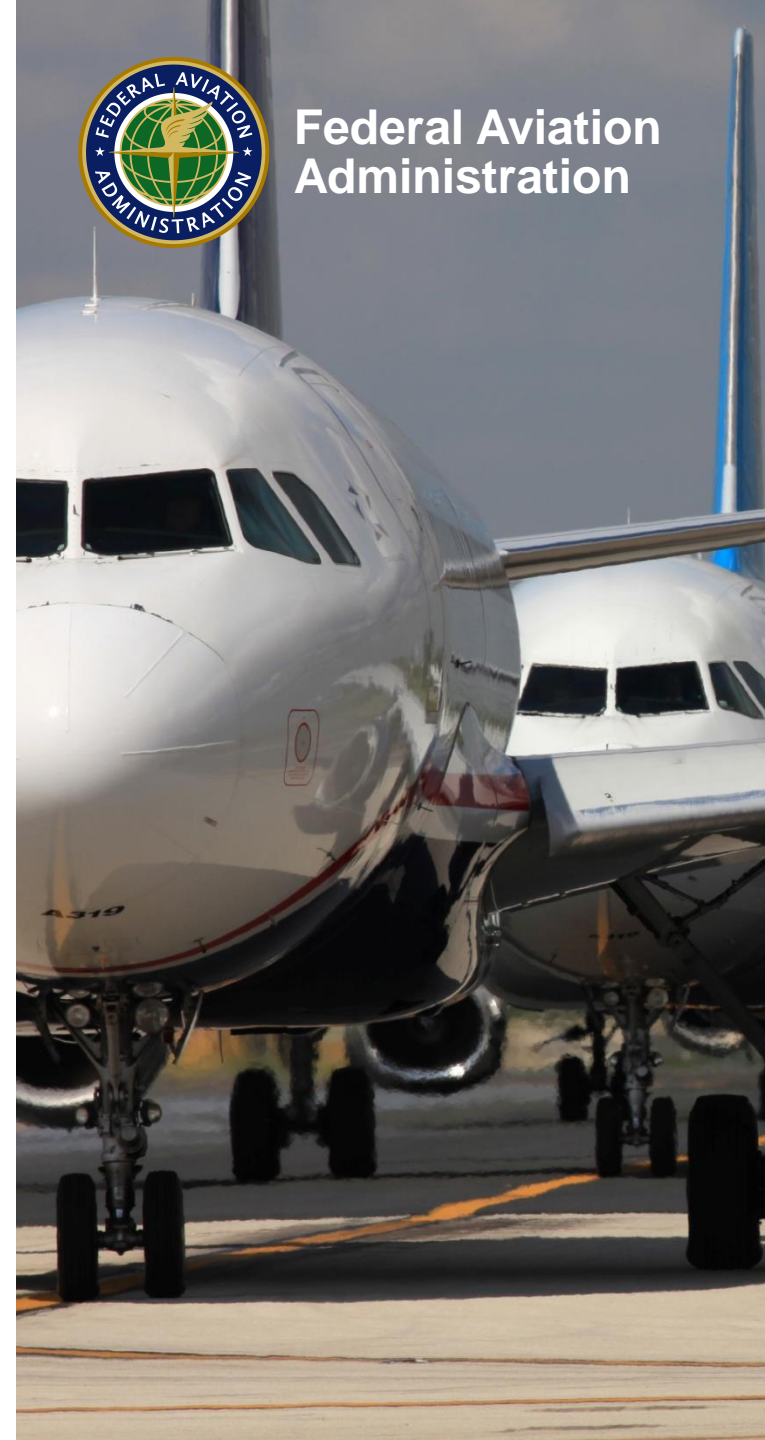
Presented to: EASA TSO Workshop

By: Design Certification Procedures Section
AIR-6C1

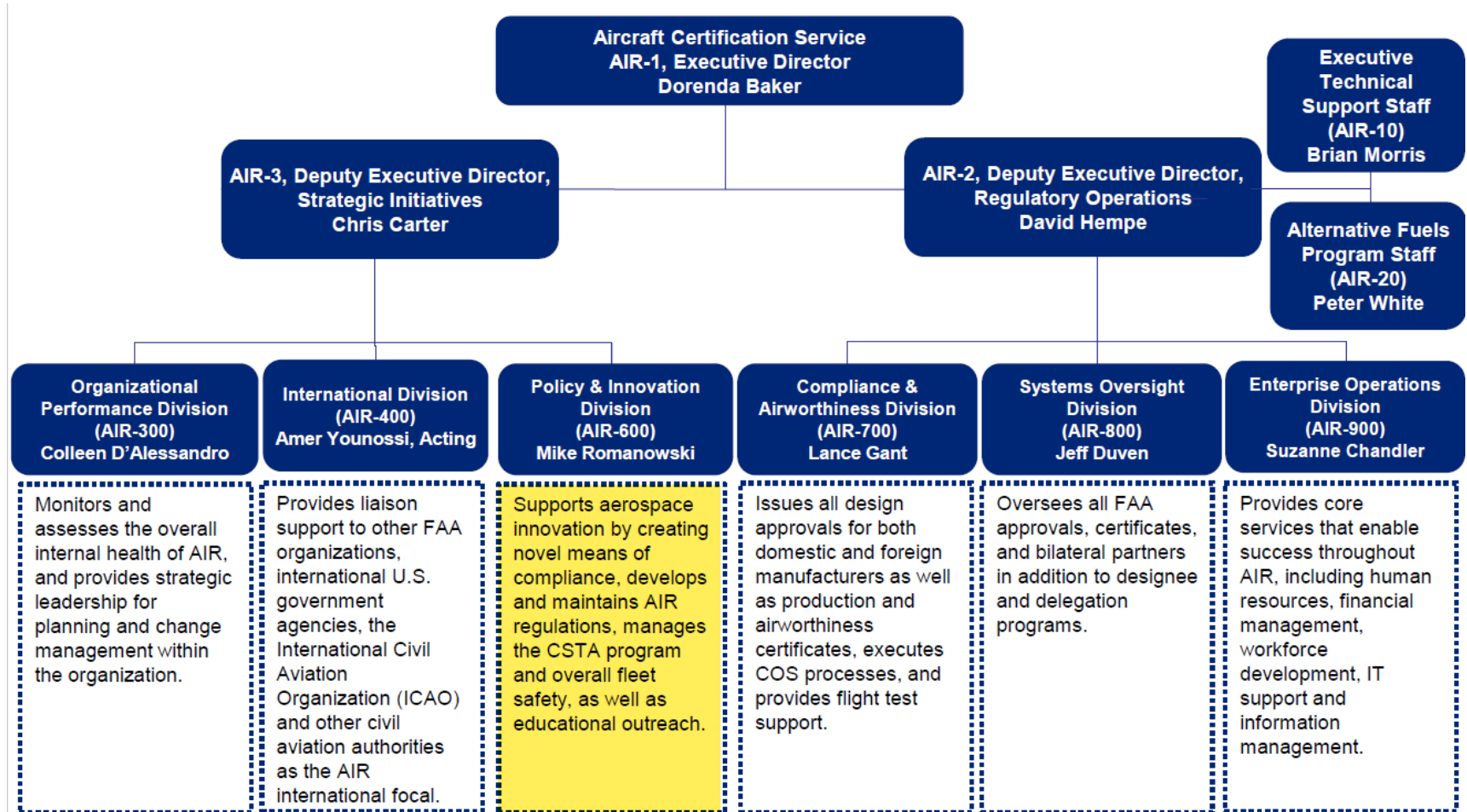
Date: September 2018



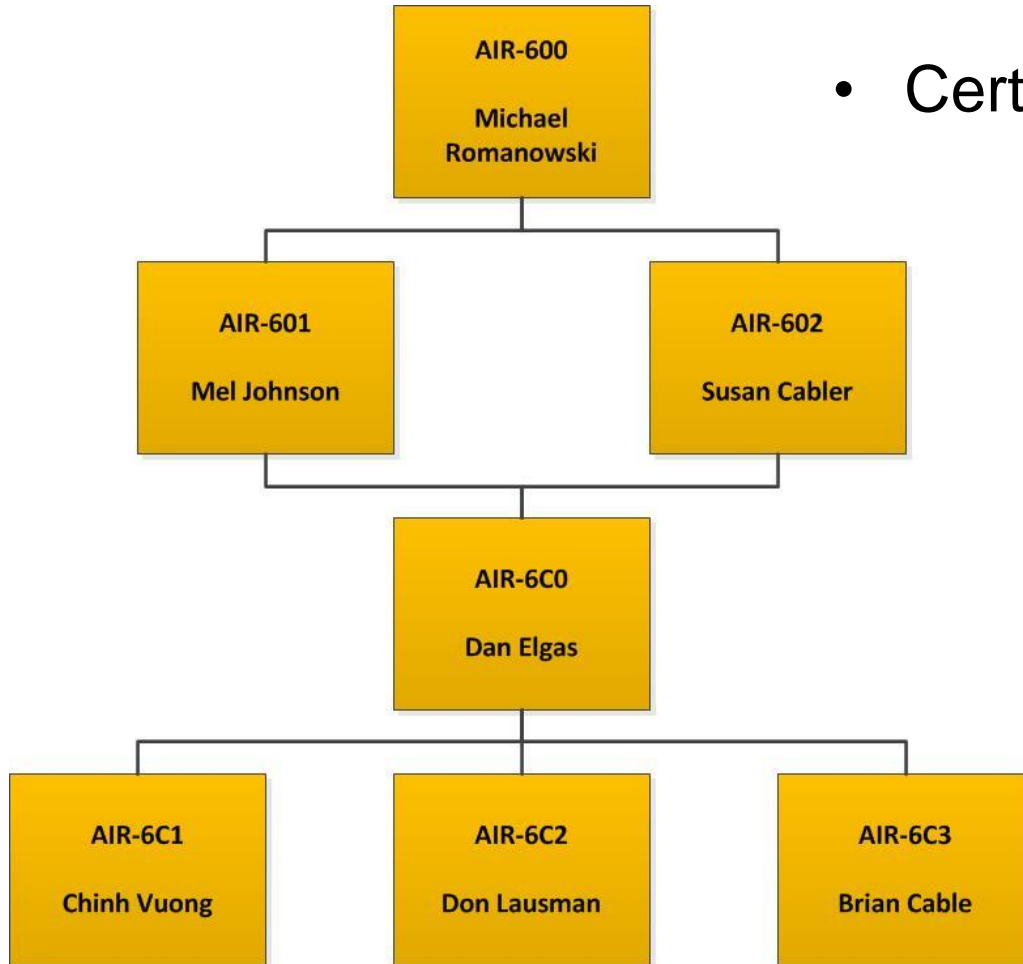
Federal Aviation
Administration



FAA Realignment (July 2017)



Policy & Innovation Division



- Certification Procedures Branch
 - Part 21 policies
 - Three sections

Order / AC Updates

- **Order 8150.1D published March 17, 2017**
- **AC 21-46A published February 23, 2017**
- **TSOA Transfers**
 - Delegated to the ACOs
 - Provisions for holders to coordinate directly with MIDO for transfers of production facilities only

Order / AC Updates (continued)

- **Deviations**

- Certain TSO deviations can be approved/denied by the ACOs without involvement from AIR-600
 - Use of a later version of RTCA/DO-160/-178/-254/-200
 - Part marking for articles with multiple TSO authorizations
 - Other deviations listed in Order 8150.1D, Appendix H

Order / AC Updates (continued)

- **Articles with multiple TSO authorizations**
 - Articles may be approved to meet multiple TSO MPS
 - A design change to an article with multiple TSO authorizations may be major to one or more TSO functions and minor to the remaining TSO functions
 - *Example: avionics box with multiple TSO functions*
 - Every TSO requires a TSO marking per 45.15(b)
 - Marking the article with only the primary TSO(s) requires a deviation
 - Applicant must list all the TSOs in the installation manual

Order / AC Updates (continued)

- **Software Qualification**

- Instructions have been added for the review of software open problem reports (OPRs)
- Clarification wording added to both Order and TSO template regarding the use of RTCA DO-178B or C

- **Non-TSO functions (NTF)**

- NTF policy moved from Order 8110.4C, Change 5
- Instructions have been added for reviewing NTF

Order / AC Updates (continued)

- **Miscellaneous additions:**

- Wording – TSOA letter is issued to the facility that controls the design and quality of the article
- Sample TSOA letter additions
 - Reminder that separate installation approval is required
 - Wording for listing accepted NTFs
- Sample compliance matrix added to AC 21-46A

Sample compliance matrix

Part 1: 14 CFR Part 21									
					Method of Compliance (see Instructions for details)				
14 CFR Part 21 Subpart O - Technical Standard Order Authorization			Amdt	A	D	T	S	O	Documentation
(a)	(b)		(c)			(d)			(e)
21.603	Application.		[21-92]						
21.603(a)	(a) An applicant for a TSO authorization must apply to the appropriate aircraft certification office in the form and manner prescribed by the FAA. The applicant must include the following documents in the application:		[21-92]						

Part 2: Technical Standard Order (TSO)-CXXX									
					Method of Compliance (see Instructions for details)				
Para #	Paragraph Text		A	D	T	S	O	Compliance Action & Documentation	
(a)	(b)				(c)			(d)	
a.	APPLICABILITY.								
(1)	<u>Minimum Performance Standard.</u> This Technical Standard Order (TSO) prescribes the minimum performance standards that anti-collision light systems must meet in order to be identified with the applicable TSO marking. Anti-collision light systems that are to be so identified and that are manufactured on or after the date of this TSO must meet the minimum performance standard of the Society of Automotive Engineers Inc. (SAE), Aerospace Standard (AS) 8017A, "Minimum Performance Standard for Anti-collision Light Systems," dated January 30, 1986.							Provide document name, such as "Application Number XXXX" or "Project Notification Letter," submitted to the FAA as part of a TSOA application. This document must also include a statement of conformance stating compliance with 14 CFR part 21, subpart O and the MPS for this TSO All documentation must be identified with the document name/identifier, date and revision number.	

Proposed next updates

- **Expected Q4 FY18**
- **Add guidance on reciprocal acceptance per bilateral agreements**
- **Add guidance for surrendering TSOAs**
- **Add clarification for incorporating articles at different TSO revision levels**
 - Mixing TSO revisions is allowed
 - Compatibility of article designs evaluated to airworthiness requirements

Proposed next updates (continued)

- **Add clarification on processing design changes for articles with multiple TSOAs that are major to one or more TSOs**
 - New part number/application to current revision of TSOs affected by major change
 - New TSO authorization letter may include remaining TSOs at their original revision levels
 - Substantiating data for unaffected TSOs remains valid

New AC 21-56 – Applicant Design Capabilities

- **Background**
 - ARC report included recommendation to assess technical capabilities of design organizations
 - Concerns over the ability of TSOA holders to address COS issues
- **Voluntary method for TSOA applicants/holders to develop a PSP**
 - Lists standard elements to include in a new PSP
- **Expected publication Q2 FY19**

New AC 21-56 – Applicant Design Capabilities (continued)

- **Formalized guidance for applicant/holder**
 - Promote a robust engineering design organization
 - Provide FAA understanding of design capabilities, establish confidence in future showings
 - Promote consistency
 - Allow FAA to use risk-based decision-making for future TSOA applications

New AC 21-56 – Applicant Design Capabilities (continued)

- Request by applicant/holder
- The FAA still makes the ‘finding’ and issues the TSOA
- Most benefit to maturing TSOA holders
- **Less benefit to mature TSOA holders**
 - Existing PSPs may already meet or be revised to include the requirements of this AC
 - Existing PSPs may already have provisions for design responsibilities establishing FAA confidence

Upcoming

- **FAA will be hosting the 2019 TSO Workshop**
- **Target date is in June 2019**
- **Location is still to be determined**

Questions?

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