

# AIR Transformation and Rotorcraft Regulations and Policy



Federal Aviation  
Administration



**Presented to:** 11th EASA Rotorcraft Symposium

**By:** Larry Kelly, FAA, Aircraft Certification Service, Policy and Innovation Division

**Date:** December 2017

# AIR Transformation - Drivers of Change

## Industry growth



- Industry expands and contracts much faster than the FAA in its current structure can manage

## Globalization of aviation



- Industry is made up of an international web of networks and complex business arrangements that are challenging our traditional regulatory model

## Heightened expectations



- The public, industry and government entities continue to increase their expectations of us to do things faster and without error

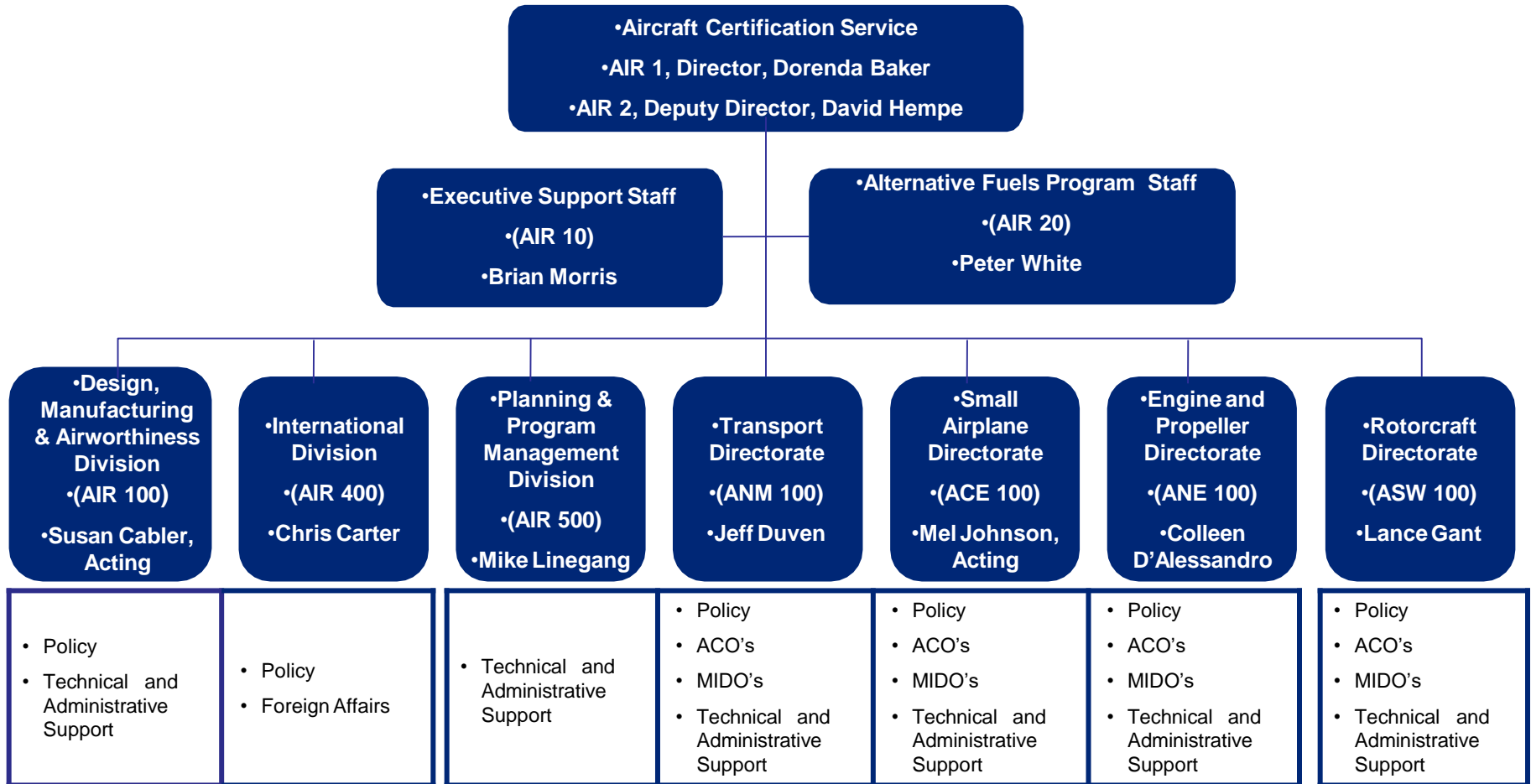
## Velocity of change



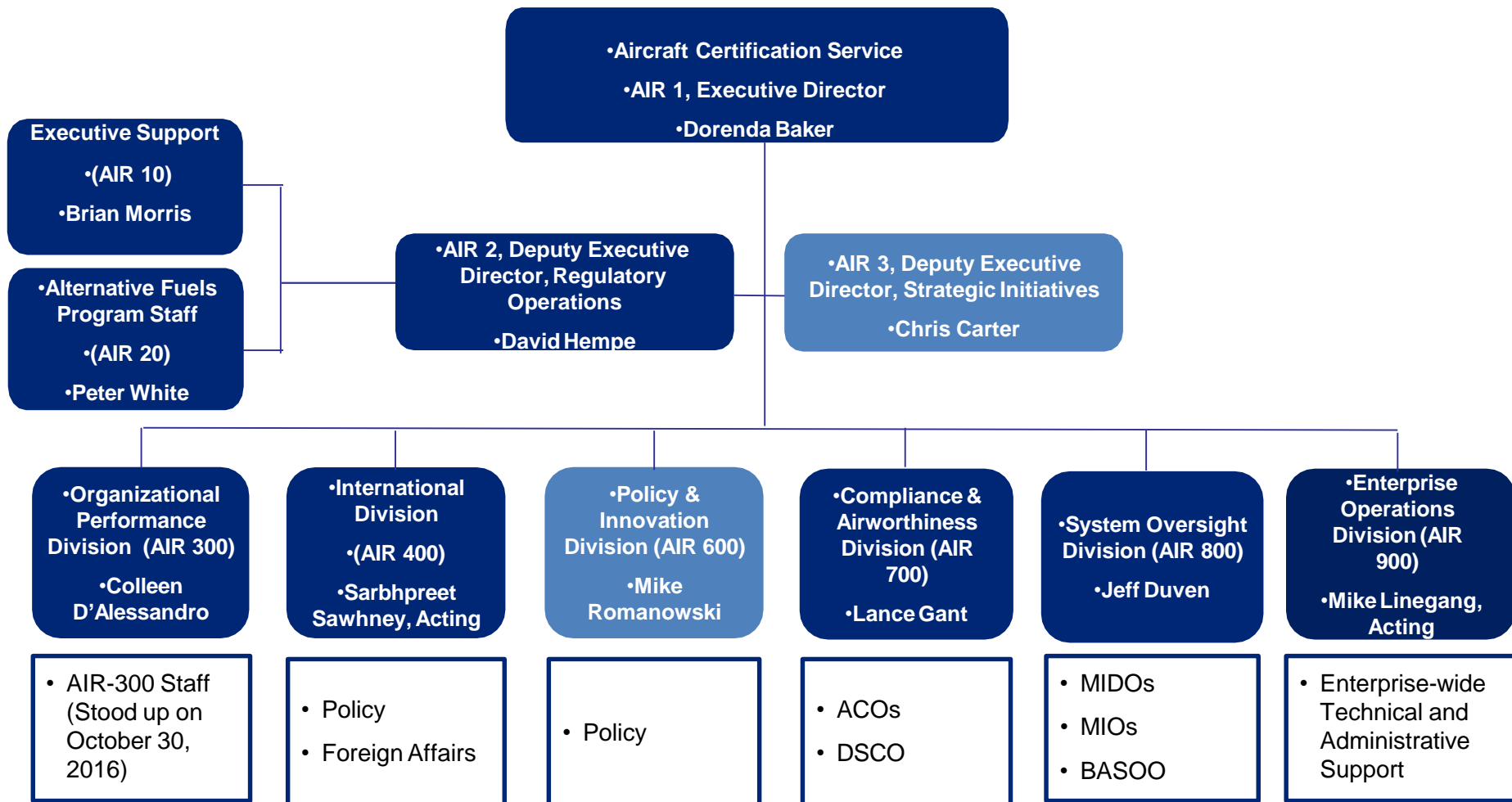
- Technological advances and business model changes are precipitating higher rates of change and increasing the need for organizational agility



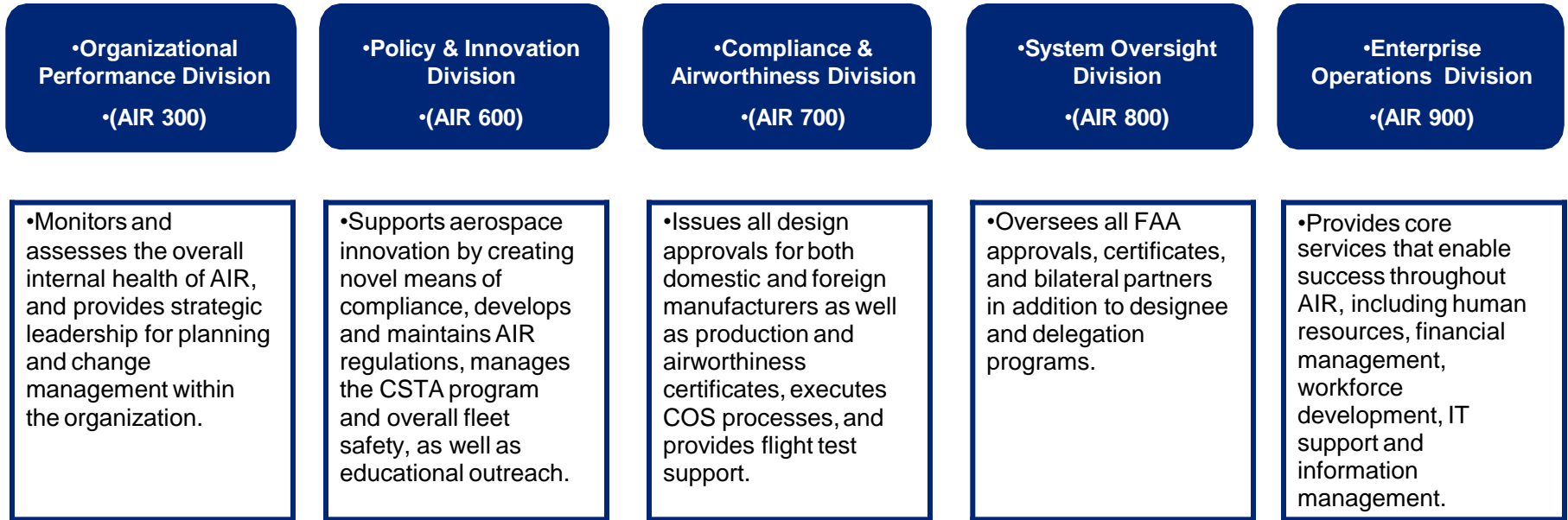
# AIR Before the Organizational Change



# Realignment as of December 5, 2017



# Functional Division End State



**Learn more on the public AIR Transformation website:**

[www.faa.gov/go/AIRTransformation](http://www.faa.gov/go/AIRTransformation)



# FAA Rotorcraft Regulations and Policy



# Rotorcraft Occupant Protection

- **ARAC Rotorcraft Occupant Protection Working Group (ROPWG) established - January, 2016**
- **ARAC Cost/Benefit Analysis of Immediate Full Compliance - December 2016**
  - Occupant protection standards are effective, but ...
  - Not cost beneficial for newly manufactured rotorcraft to pursue immediate full compliance
- **FAA defined next task in January 2017**
  - Which paragraphs of occupant protection standards can be made effective within 3 years for newly manufactured rotorcraft (NMR)
  - With expectation of full compliance within 10 years for NMR



# Rotorcraft Occupant Protection

- **ARAC provided interim report June 8 2017**
  - Regards CRFS *only* for Newly Manufactured Rotorcraft (NMR)
  - Found “partially compliant” CRFS installations are effective
  - Not necessary to require that NMR meet all CRFS requirements
  - Provided preliminary list of recommended CRFS requirements for NMR
- **Final report for NMR, to include both CRFS and CRSS (structure), is due January 2018. On track to deliver.**
- **Final task after January 2018 report:**
  - Consider what safety improvements could be made for the *existing* rotorcraft fleet, with a 6 month tasking period, finishing in mid-2018
- **Check ARAC website for further information:**  
[https://www.faa.gov/regulations\\_policies/rulemaking/committees/documents/media/9-14-17%20ARAC%20Read%20Ahead.pdf](https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/9-14-17%20ARAC%20Read%20Ahead.pdf)
- **A list of rotorcraft with CRFS compliant systems may be found at:**  
[https://www.faa.gov/aircraft/air\\_cert/design\\_approvals/rotorcraft/media/rot\\_CRFS\\_Compliant\\_List.pdf](https://www.faa.gov/aircraft/air_cert/design_approvals/rotorcraft/media/rot_CRFS_Compliant_List.pdf)





# Rotorcraft Bird Strike Protection

- **ARAC was tasked April 27, 2016:**
  1. Incorporate bird strike protection (BSP) into part 27 for new *certifications*?
  2. Incorporate BSP for newly *manufactured* part 27 rotorcraft?
  3. Enhance existing part 29 BSP requirements for new certifications?
  4. Make enhanced BSP requirements effective for part 29 NMR?
  5. Require BSP requirements for existing fleet?
  6. Consider non-traditional BSP technology.
- **Check the following website for status and technical information:**  
[https://www.faa.gov/regulations\\_policies/rulemaking/committees/documents/media/9-14-17%20ARAC%20Read%20Ahead.pdf](https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/9-14-17%20ARAC%20Read%20Ahead.pdf)
- **Recommendations will be to ARAC, December 14, 2017.**
- **Briefing later at the 11<sup>th</sup> EASA Rotorcraft Symposium**



# Rotorcraft Rulemaking - Current

- **Current Miscellaneous Part 27/29 (FY15)**
  - 27/29.1305 & 27/29.1549 (OEI Training Mode)
  - 27/29.1305 (Synthesized Power Indicator)
  - 27/29.1309 (Eliminate need for 27.1309 SCs, update failure condition terminology)
  - 27/29.1329 & 27/29.1335 (Autopilot & Flight Director)
  - 27/29.1333 & Appendix B (Interconnection of pilot/co-pilot systems)
  - 27/29.1545 & 27/29.1549 (Powerplant Instrument display of operating ranges)
  - 27/29.1353 (Recognize various battery technologies, e.g. Lithium)
- **Update of these miscellaneous Part 27/29 rules will eliminate the need for recurring SCs, ELOS, & MOC IPs.**
- **NPRM was published in the Federal Register November 1, 2017. Comment period closes January 30, 2018.**



# Rotorcraft Rulemaking - Current

- **Proposed New Rotorcraft Rulemaking (FY16)**
  - Application for Rulemaking approval ~ Mid 2016
  - Special Rotorcraft Configurations Proposed Rules
    - Search & Rescue (SAR)
- **Update of these Part 27/29 rules will eliminate the need for recurring SCs**



# Rotorcraft Rulemaking - Current

- **Proposed New Rotorcraft Rulemaking (FY18)**
  - Single Program Office Tool (SPOT) Rule (i.e. “fast track rule”)
    - 30-Min All Engines Operative (AEO)
    - Anti-collision lights (red/white)
- **Update of these Part 27/29 rules will eliminate the need for recurring SCs and ELOS**



# Rotorcraft Rulemaking - Current

- **27/29.773 Pilot Compartment View**
  - Single Program Office Tool (SPOT) Rule (i.e. “fast track rule”)
  - NPRM issued Oct. 17, 2016
  - Public comment period ended December, 2016
  - Final rule is in the signature process and should be published early 1st quarter CY 2018.
- Relieving to industry by adding “**ground test**” as an option where appropriate. Current rule requires night “**flight test**”.



# Rotorcraft Rulemaking - Future

- **Part 27/29 Rewrite**

- Industry is conducting a study of a potential rewrite of Parts 27/29 and will provide recommendations to the FAA by December 2017
- Industry recommendations will be reviewed by FAA and coordinated with other bilateral partners (EASA, TCCA)
- Any rulemaking recommendations will follow formal rulemaking process, including use of the ARC/ARAC process



# Policy – Systems and Equipment

- **Rotorcraft Safety Continuum for Part 27 Systems & Equipment Policy Statement – June 30, 2017**  
[http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgPolicy.nsf/MainFrame?OpenFrameset](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgPolicy.nsf/MainFrame?OpenFrameset)
- **Evaluated 27.1309 guidance to better address challenges with Part 27 (Normal category) rotorcraft:**
  - emerging technology,
  - legacy rotorcraft,
  - broad range of aircraft size, capability and complexity under Part 27
- **Part 27 S&E Policy Statement address these challenges**
  - tiered approach for certification of Part 27 systems & equipment (classes of rotorcraft)
  - Development Assurance Levels (DALs) tiered based on classes of Part 27 rotorcraft
- **Briefing later at the 11<sup>th</sup> EASA Rotorcraft Symposium**



# Policy – Inlet Barrier Filter

- **IBF Policy Statement PS-ASW-27/29-07 – May 8, 2017**  
[http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgPolicy.nsf/0/A039DF0A2BFB89578625811C00649D9F?OpenDocument](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgPolicy.nsf/0/A039DF0A2BFB89578625811C00649D9F?OpenDocument)
- **Follow-up Tasking for SAE S-12 Committee**
  - Develop alternative methods for determination of power available and substantiation of acceptable inlet distortion.
  - S-12 effort includes authorities, engine and aircraft OEMs, modifiers, and others.
  - Committee is making good progress on power available, and inlet distortion tasking is beginning.
- **Briefing later at the 11<sup>th</sup> EASA Rotorcraft Symposium**





# Questions?

