



New Technology: A Challenge for Regulators?

Panel Number 2

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Major Discussion Points

- Moderator – Norbert Lohl made the point that the regulators have demonstrated in the past a willingness and ability to meet the certification challenges that new technology presented. He stated that the regulators are ready to meet the challenges in the future for more advanced technologies. He asked the audience how the regulators can do an even better job in the future.
- Panellist – Dorenda Baker added that regulators need to understand technology before the proper risk management can be applied. She stated that the system is designed to accept new change and outlined the steps to manage safety by system evaluation, the impact of risk from the system and developing appropriate requirements and standards. There must be a balance between the safety benefits versus risk the system brings.
- Panellist - David Turnbull acknowledged that new technology can raise the safety bar. He discussed new technology as it impacts new platforms and in the retrofit scenario. There must be a collaborative effort between the regulator and the applicant to understand the new technology. In particular retrofitting new tech can be problematic to make it fit into an older aircraft designed to an older certification basis. He expressed a concern over step increases in certification costs and resources expended when safety benefit increases are miniscule – there must be a proper balance.
- Panellist - Randy Robertson expressed a concern when the technical specialist involved feels compelled to become an expert on the new technology rather than manage the program based on the applicant's collective expertise and experience. He was concerned that some technology that can provide substantial increase in safety may not come to fruition because the compliance costs are driving the design assurance level to an unreasonable level.

Questions and Comments from the Floor

- Company unknown: What can industry do to better prepare regulators for new technology knowing regulators have reduced resources? Consider greater early involvement from regulators – even one day pre-application familiarization meetings can be valuable.
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- Airbus: Stated that so far industry is satisfied with regulators ability to manage new technology. There is a concern that more advanced technologies in the future will require the regulators to ensure they have the appropriately skilled experts.

Outcomes/Additional Ideas

- Greater need to discuss technology prior to certification – familiarize the authority with the anticipated application.
 - Applicant should build a strong case for why they have demonstrated the new technology, particularly in the case of retrofit, was appropriately evaluated. Also clearly explain the technologies capabilities and non-capabilities; don't wait for the regulator to discover it.
 - Consider incremental compliance commensurate with safety risk much like the proposal under the FAA Part 23 ARC.
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