



EASA
European Aviation Safety Agency

EASA Research Activities

EASA Workshop on Additive Manufacturing

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Cologne, 26 September 2016

Your safety is our mission.

An agency of the European Union





Why should safety regulators launch own research projects and be involved in research?

- Adaptation of standards to novel technologies/concepts
 - Policy, decisions, regulations, guidance material and recommendations for safety improvements / environmental protection should be based on sound scientific grounds;
- Research can save time/money
 - Lowers risks for implementation
 - Costs of misguided rules is high
- Develop and maintain key expertise



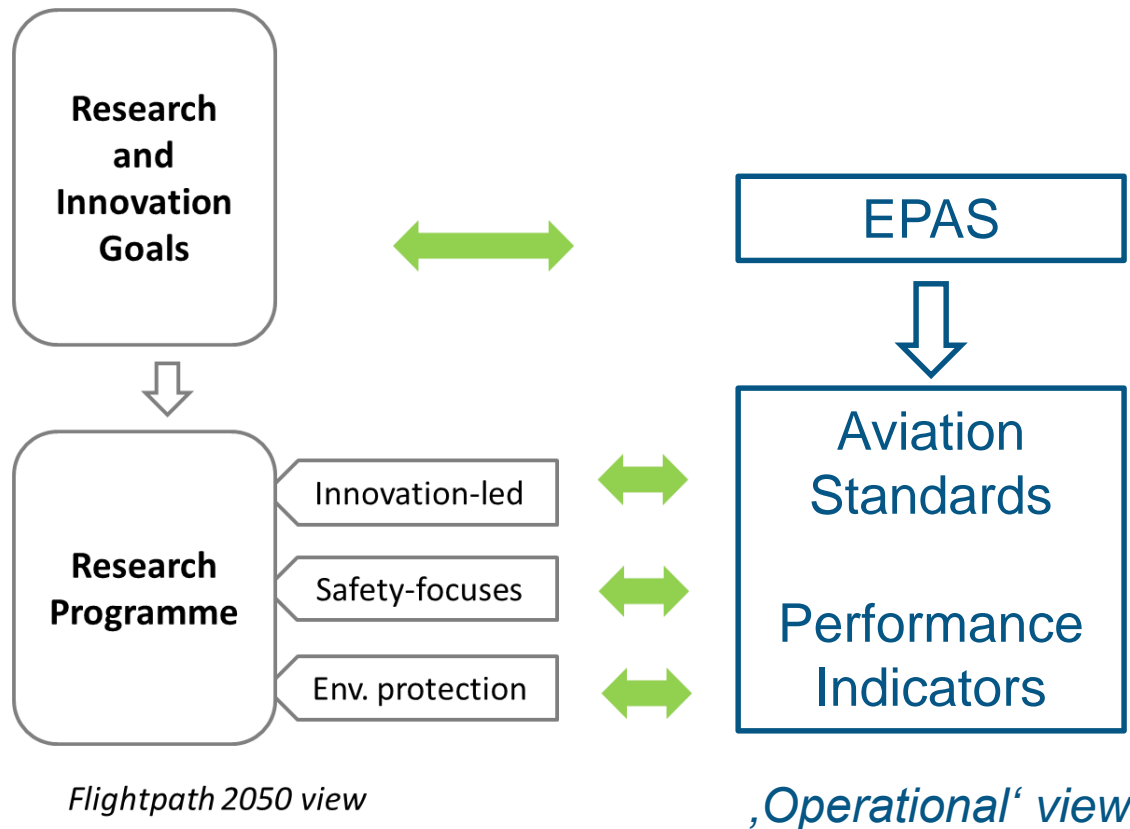
The Situation – from EASA Perspective

- EASA's mandate in current Basic Regulation:
 - ❑ The Agency may develop and finance research in the field of its competence,
 - ❑ The Agency shall coordinate its research activities,
 - ❑ The results of research shall be published
 - ❑) “ ... Commission and EASA ... shall take into account the latest scientific and technical evidence“
- Agency's research priorities are set by the European Plan for Aviation Safety (EPAS)
- A-NPA 2014-12 revision of Basic Regulation
 - ❑ Stakeholders support strengthened EASA role in research coordination



Key Elements for EU Aviation Research

Develop an effective EU Aviation Research policy and associated programme



Portfolios

- Balancing long-term and short term needs
- Adequate funding level required
- EASA on board !



Key Elements for EU Research

Develop coordinated actions in Safety and Environmental Protection





Key Elements for EU Research

Engagement with Stakeholders

- Limited EU resources dedicated to safety and environmental protection research:
 - ❑ Shall be focused on “doing the right research”
 - ❑ Cohesive actions shall be planned and monitored to provide the “right output” to aviation stakeholders
- Constitution of a coordination framework
 - ❑ Networking actions involving manufacturers, operators, research organisations, universities, National Aviation Authorities and the European Commission
 - ❑ Build on existing mechanisms, e.g. ACARE, SESAR and Clean Sky Joint Undertakings



Key Elements for EU Research

Support to research

- Reducing time to market through support to innovation early enough in the process.
 - ☐ Prepare evolution of regulations*
 - ☐ Prepare evolution of standards*
 - ☐ Prepare evolution of regulatory practices
 - ☐ Prepare deployment

* The latest at TRL 6 or higher



Key Elements for EU Research

Specific research

- Getting ready for the global context: Enhancement of global safety and environmental protection centred research to allow Europe to take a leading role.

Urgent research

- EU needs to be able to react swiftly to urgent safety needs in light of air transport accidents, incidents, occurrences or crisis.



Actions under Development

- Develop the new 'tools' for research
 - 'Fast action' projects – Possible framework contract
 - Specific research – Research requests to the Commission
 - Participation in existing programmes
 - EASA involvement specified in the calls
 - Collaboration agreements with selected projects



- Research areas of outstanding relevance
 - Lithium Batteries
 - Cabin air quality
 - Flight time limitation
- EASA approach for Horizon 2020 work programme
 - Operational safety issues, e.g. loss of control in flight, ext. hazards
 - Changes to standards, e.g. composite materials, cyber security.
 - Systematic issues, e.g. big data analysis for safety
 - Human factors issues
 - Emerging safety issues



EASA

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QUESTIONS ?

See also research web page:

www.easa.europa.eu/easa-and-you/safety-management/research

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