



EASA
European Aviation Safety Agency

EASA Research

EASA Workshop on Additive Manufacturing

Werner Kleine-Beek
Research Officer

Cologne, 27th September 2016

Your safety is our mission.

An agency of the European Union





EASA Research Strategy

The MB endorsed the EASA Research Strategy (MB 2015 WP05)

The four strategic objectives of EASA Research Strategy:

Reduce
Time-To-
market

Support the industry
upstream, ensure reg.
framework is not an
impediment to innovation

Get ready
for the
Global
Context

Ensure EU has the means to
play a leading role in all
emerging and future
technologies

Cohesive
Research
Planning and
Monitoring

Ensure synergies, avoid
duplication and dispersion of
research efforts

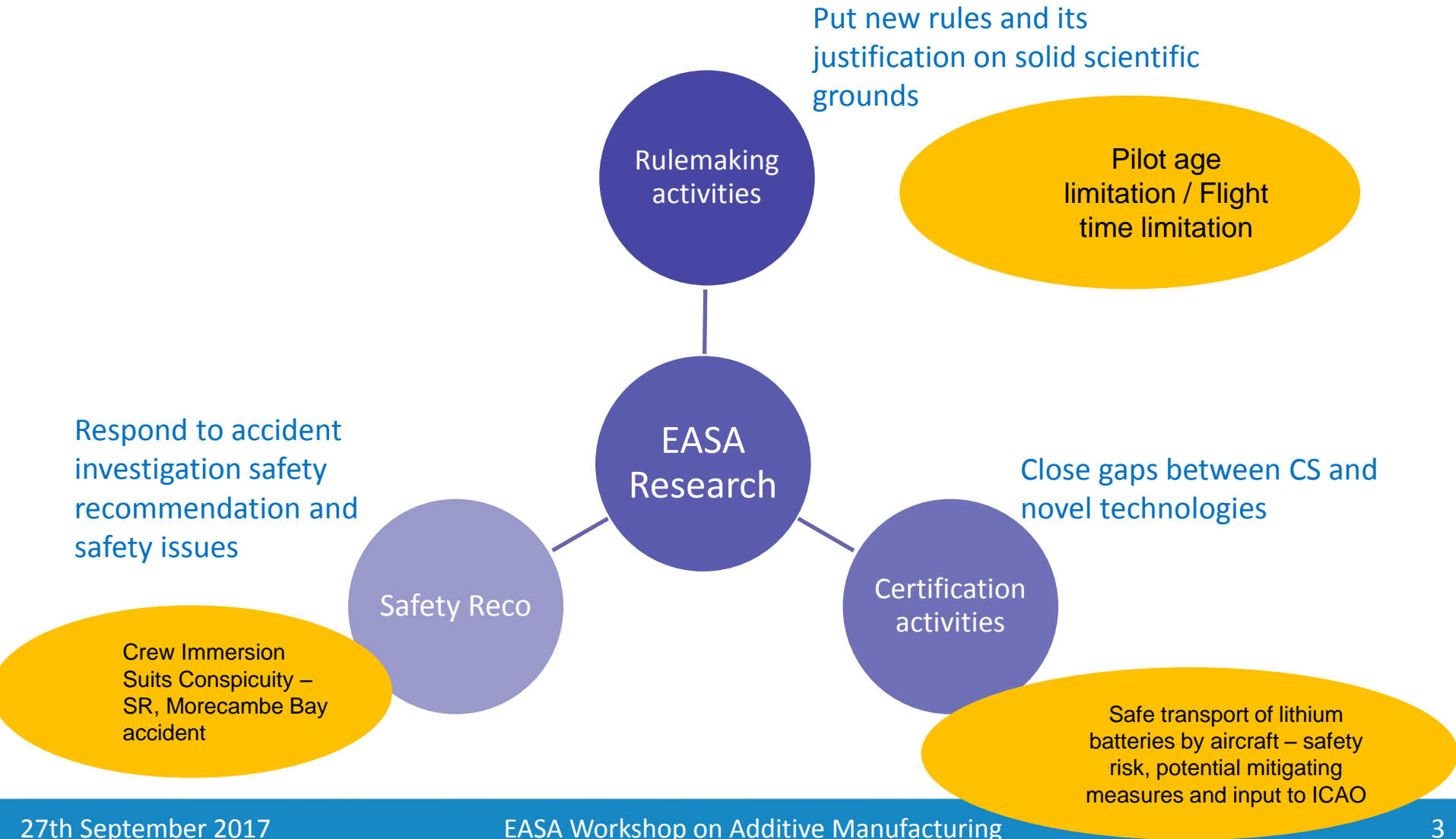
Enable
Urgent
Aviation
research
Actions

Enable reactivity after
accidents or identification of
imminent safety issues

Draft revision of Basic Regulation: Strengthened EASA role in research coordination



Support to EASA core activities





EASA research priorities reflect EPAS

- **Systematic Issues, e.g.**
 - Human Factors
 - a/c tracking
 - Rescue operation
- **Operational Issues, e.g.**
 - Loss of control in flight,
 - External hazards, weather etc.
 - Runway & ground safety
- **Emerging Issues**
 - Civil drones (RPAS)
 - New business models
 - New products, systems technologies, e.g. AM



Current Research activities – EASA

- **Examples of Research activities conducted / supervised by EASA**
 - **Own projects (recent):**
 - Crew Immersion Suits Conspicuity – SR, Morecambe Bay accident
 - Pilot age limitation – public and professional interest
 - Impact Assessment Cyber Security Threats – emerging safety and security risks
 - Disbond of Sandwich Structure - continued airworthiness, future rulemaking needs and/or guidance
 - **EASA project requests supporting rules/standards (financed by MOVE)**
 - Flight time limitation – political, requested by EP
 - Safe transport of lithium batteries by aircraft – safety risk, potential mitigating measures and input to ICAO
 - CAQ level inside the cabin and its health implication – pressure by public and unions
 - **Support / advice to industry projects (H2020 safety call for the Agency)**
 - SafeClouds.eu - Massive Data Analytics for Aviation Safety
 - European Natural Airborne Disaster Information and Coordination System for Aviation
 - Increased Safety and robust certification for ditching of aircrafts and helicopters
 - Modular Approach to Hybrid Electric Propulsion Architecture



List of Urgent Research Needs

- **Helicopter Off-Shore operations – New floatation system:** technical feasibility and maturity of one proposed means of compliance for helicopter post-capsize occupant survivability improvement – to be performed in order to close open issues of new EASA standards - estim. budget: 3 Mio
- **Vulnerability of manned aircraft to drone strike :** following the on-going initial investigation funded by EASA, not addressed by SESAR exploratory research
- **Cybersecurity:** Common vulnerabilities to Critical Transport Infrastructures, initial discussions with DG HOME took place, it is not yet confirmed that such specific topic may find its way through H2020 new WP for Security
- **Quick recovery of flight recorder data** – following MH370 accident and international discussions at ICAO level, already commercial services are advertised by Satcom providers but several key issues remain to be addressed, e.g. data management, confidentiality protection, access for safety regulators



Funding opportunities

- EU subsidies to EASA for operating the Agency
 - Mainly used for urgent research
- EASA resources
 - EASA multiannual framework contracts
 - High priority projects coordinated with stakeholders
- DG MOVE supporting high priority projects
 - projects of common interests / needs
- Horizon 2020 work programmes
 - Contribute EASA's needs and priorities to the WP
 - Support projects by in-kind contribution as 3rd party



Funding opportunities

➤ MoC with Clean Sky

- Contribute EASA's needs and priorities to the CfPs, members may pick up a topic and launch a project
- Support projects by in-kind contribution as 3rd party
- CSJU may launch a project as a thematic topic

➤ MoC with SESAR

- Similar to MoC with Clean Sky
- Almost all ATM/ANS is run by SESAR

➤ National research programmes LuFo, TAKE OFF, ...

- Suggestions for WPs, support by in-kind contribution



EASA

European Aviation Safety Agency

QUESTIONS ?

See also research web page:

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

- Research Project Reports
- EASA Research Programme
- Form for Research Requests / Proposals, EASA participation in research activities

Your safety is our mission.

An agency of the European Union

