EASA
European Union Aviation Safety Agency

Welcome to the EASA H2 Certification Workshop

Rachel Daeschler,

EASA Certification Director

Your safety is our mission.

An Agency of the European Union

Agenda – *session-1*

TIME		TITLE / SPEAKER	
08:00 – 08:30		Morning Coffee and networking	
08:30 – 08:40		Welcome and introduction of the Workshop Agenda *Rachel Daeschler, EASA Certification Director*	*Rachel Daeschler, EASA Certification Director*
08:40 – 09:00	#1	Keynote pitch –Toyota H2 road vehicle success story *Key aspects and learnings to the success of the Toyota H2 powered vehicle and recommendations to the aviation sector.*	*Tomokazu Hayashi, Head of R&D, Quality & Regulatory Compliance, and Manufacturing Hydrogen Factory Europe*
09:00 – 10:40		*Session-1: Roadmap for Certification*	
09:00 – 09:20	#2	*H2 Certification Roadmap. A joint presentation by EASA, FAA and CAA UK* In a joint presentation EASA, FAA and CAA UK will present the vision for enabling harmonisation and certification of H2 powered aircraft	*Javier Castillo (EASA)* *Catalin Fotache (FAA)* *Helen Leadbetter (CAA UK)*
09:20 – 09:40	#3	*AZEA – Engaging the aviation ecosystem for the timely adaptation of the regulatory framework to support certification of H2 technologies* Proposal of a standardisation roadmap and sufficiency of the certification framework. Recommendations to the regulators	*Beatrice Toussaint, AIRBUS)* *Joan Serra (GAMA)* *Jonathan Archer (SAE)* *Esther Hoyas (EUROCAE)*
09:40 – 10:10		*SDO role and perspective* Standards as enablers and as result of evolving technology. Role of the SDOs and recommendations to the roadmap	
10:10 – 10:40		*Debate. Q&A Session-1*	
10:40 – 11:00		Coffee Break & group photo (foyer)	

Agenda – *session-2*

11:00 – 13:10	*Session-2: Technology and Certification readiness*		
11:00 – 11:20	#4	*"International White Paper"* Introduction to a "International White Paper" on H2 technologies for aviation. Outline of some of the key aspects and challenges. Exploration of the possible paths for certifying a H2 aeronautical product. Type Certification boundaries. Recommendations.	*Linda Brussaard (EASA)* *Catalin Fotache (FAA)* *Helen Leadbetter (CAA UK)*
11:20 – 11:40	#5	*Clean Aviation – Enablers for a successful path in a multidimensional ecosystem.* Recommendations from Clean Aviation for a successful technological and certification roadmap in a multidimensional industrial ecosystem	*Paolo Trinchieri (Clean Aviation)*
11:40 – 12:00	#6	*Airbus – Technology/requirements/MoC/standards. "Chicken and egg" dilemma. Airbus vision* H2 technology is called to be the concept to decarbonize commercial aviation in the future. Airbus will present their reflections and recommendations to resolve the complex equation regarding the Technology/requirements/MoC/standards	*Jean-Phlippe Tarres & Beatrice Toussaint (Airbus)*
12:00 – 12:20	#7	*CONCERTO – CRL & TRL for disruptive technologies and products. New Concept* Authority involvement on development of innovative products. CRL & TRL concept as new paradigm on the engaging between OEM and Certification Authority	*Joël Jezegou (CONCERTO)*
12:20 – 12:40	#8	*APUS – Flight Conditions and PtF for innovative products. Safety of Flight.* The path of maturing and flight testing an innovative prototype aircraft. The experience of APUS and learning points.	*Stefan Radek & Erik Braun (APUS).* *Marco Capaccio (EASA)*
12:40 – 13:10	*Debate. Q&A Session-2*		
13:10 – 14:00	**Lunch Break**		

Agenda – *session-3*

14:00 – 16:10		*Session-3: Technology bricks and Hazards*	
14:00 – 14:20	*#9*	*H2 Storage and distribution – MTU* Technology and the specific hazards related to H2 Storage and distribution.	*Nicolas Yernaux (MTU)*
14:20 – 14:40	*#10*	*H2 Direct Burn – Rolls-Royce & DLR* Technology and the specific hazards related to H2 Burn in a gas turbine	*Thomas Frank (Rolls-Royce)*
14:40 – 15:00	*#11*	*H2 Fuel Cell – POWERCELL* Technology and the specific hazards related to Fuel Cell Systems	*Stefan Bohatsch (POWERCELL)*
15:00 – 15:20	*#12*	*Cranfield University – Technology bricks & Challenges. Importance of research* Research and understanding the technology around H2 and defining the correct design parameters for complex trade-offs is key. Cranfield University is deploying efforts in this area and they will present the main conclusions and recommendations of today.	*Guy Gratton (Cranfield University)*
15:20 – 15:40	*#13*	*H2 Hazards – Overview; Fire & explosion risk; crashworthiness – EASA* The Regulator outlook to the H2 Hazards with focus on fire & explosion risks and on crashworthiness.	*Linda Brussaard, Emily Lewis, Remi Deletain (EASA)*
15:40 – 16:10		*Debate. Q&A Session-3*	
16:10 – 16:30		Networking Coffee Break	

Agenda – *session-4*

16:30 – 17:30		*Session-4: Common learning path and Synergies.*	
16:30 – 16:50	*#14*	*EASA highlights on common learning path, competency acquisition and synergies* Raising awareness on the benefits and the importance of working collaboratively, sharing knowledge and competency acquisition on the common denominators. Highlighting synergic potentialities.	*Javier Castillo & Douriya Ouguenoune (EASA)*
16:50 – 17:20		*Debate. Final Q&A. All topics*	
17:20 – 17:30		Workshop takeaways and Conclusion remarks *Colin Hancock, Head of Department Policy, Innovation & Knowledge*	*Colin Hancock, Head of Department Policy, Innovation & Knowledge (EASA)*
		End of Workshop	

Highlights and Expectations

- → H2 is in the path towards decarbonizing aviation.
  - → Understanding the hazards and overcoming the challenges is essential to make it feasible.
- → Joint and coordinated effort of all actors: regulators, industry, SDOs.
  - → Everybody is on learning path on H2 for aviation.
- → Harmonisation is key to success.
- → The outcomes of the present workshop is of paramount importance to calibrate the roadmap and align expectations.

Practical arrangements

→ Slido session (#H2EASA) → Post your questions! This is to be an interactive Workshop.

→ All presentations will be published in the EASA website after the event.