



EUROCAE SYMPOSIUM

Warsaw, Poland

28-29 April 2022

EUROCAE organised its 2022 Symposium on 28 and 29 April in Warsaw. This event was attended by almost 80 participants on site and up to 200 experts joined online the live streaming and the discussions. Following 2 years with no or virtual only events, it was a great opportunity to meet our members and partners again and engage in lively exchanges during the Symposium sessions as well as to enjoy our traditional Gala Dinner and Award Night.

The Symposium was organised around 6 dedicated panels.

Panel 1: Air Taxis - concept or reality?

VTOL aircraft will revolutionise air mobility. This new technology is being developed at a pace rarely seen before in the aviation industry. The question is, are we ready? The panel members debated this question from a regulatory, technical, infrastructure and societal point of view, together with a vision of how VTOL aircraft will change both modern aviation and the way we live. It came to the following conclusions:

- The biggest challenges are the infrastructure on the ground – the Vertiports - and the airspace integration - a whole new system needs to be developed and validated, especially for the connection of rural places.
- Although first operations are planned for 2024, so in two years, it appears that society is still sceptical about this ambitious plan - social acceptance will be one of the key factors
- Collaboration between industry, regulator and standardisation bodies is essential to guarantee that all aspects of VTOL operations are ready

EUROCAE WG-112, and its 600 registered experts, is a perfect example of this integrated approach and is committed to contributing to the final goal.

Panel 2: How Are Aviation Stakeholders Preparing for (EU) 2021/664?

Drones are growing increasingly prevalent, and to perform efficient operations, the establishment of U-space is crucial. (EU) 2021/664 is one of the cornerstones enabling the safe operations of UAS in the U-space airspace. The panel discussed the U-space concept, debate the possibility to integrate U-space and ATM, identify safety challenges around U-space services, and discuss how various players in aviation are addressing this rapidly evolving landscape. We saw that

- common standards are required for all digital services, and we must ensure that standards relevant to operations in U-space are available.
- Harmonised procedures will also be needed to react in case of dynamic reconfiguration, avoid manned aircraft in a U-space airspace, or react to a non-conformant drone.
- ANSPs are preparing for the implementation of the U-space airspace, in particular the ability to implement a dynamic airspace reconfiguration.
- Early interaction of SESAR demonstrations and validations projects with standardisation activities play a key role to support the early movers in the implementation of U-space regulation, as well as maturing and validating more advanced services.
- Mature ATM industry partners already provide solutions that are not only related to U-space/ATM interfaces but also support U-space implementation.

Panel 3: UAS Technology

Being one of the most dynamic sectors in aviation over the last couple of years, UAS has achieved a mature level of technology supported by extensive R&D and validation exercises. The panel looked into how technology evolved over the years, the regulatory risk-based, operation centric approach as well as some potential future evolutions. The panelists noted in particular that

- EASA defines Means of Compliance and Guidance in support of UAS certification and operations, but also identifies priority gaps which need to be addressed by SDOs – the UAS regulatory framework needs high quality industry standards to ensure the completeness of the ecosystem.
- Civil-military synergies present opportunities to boost development of drones technologies in Europe and beyond. As such, Detect and Avoid, Command and Control Datalinks but also on Artificial Intelligence/Machine learning applications are key enablers of autonomy and UAS integration into the airspace
- There is a need, and an opportunity, for a unique voice of small/medium UAS manufacturers to advance their views on regulation and standardisation.

EUROCAE WG-105 will continue its engagement and work on these important aspects discussed in panels 2 and 3.

Panel 4: Ensuring Cyber Resilience: developments in this ever-changing domain

The EU regulation, also known as Part-IS, is expected to provide soon the means to ensure the resilience of the European Aviation ecosystem against the information security menaces. This panel discussed the ways towards compliance with the regulation, the means to ensure a common level playing field and its oversight.

One of the main outcomes was that strategic coordination in the EU is intended to make aviation an evolutionary cyber-resilient system, able to maintain its essential functionalities under attack and to be self-strengthening by adopting a “built-in security” approach.

- For authorities, information sharing and trust are essential for empowering the aviation ecosystem to move from individual to collective cyber resilience.
- For the aviation industry, compliance to an increasing number of overlapping cybersecurity regulations (sectorial, global / regional, civil / military, safety / capacity) shall shift towards a global and business risk-based security management system implementation.
- For airlines and operators, implementation of EU “Cyber” Regulation is seen in a digital transformation landscape. As such, it implies the need for harmonisation of different cyber security regulations, with impacts at different levels of organisations
- Trainings, methodologies tools and support to states are essential means.

- This should encourage the use a Standard-based approach whenever possible, addressing the security challenges for aviation as a whole.

EUROCAE WG-72 is a central venue for all stakeholders to develop the supporting industry standards.

Panel 5: Sustainable Aviation Technologies

In the recent years, many initiatives started to ensure sustainability in aviation. This panel looked at ongoing projects for sustainable energy sources and propulsion systems and spoke about expectations, challenges and the importance of industry standards to support certification and bringing these new technologies into the market. Highlights of the discussion were:

- Carbon neutrality by 2050 is an ambitious goal, which requires the effort from all parties to be successful. Standardisation activities are key and are needed on time to support new technologies considered to this end.
- At aircraft level, the main challenges are noise, emissions, and contrails. Practical experience with Sustainable Aviation Fuel (SAF) and hydrogen as well as solutions on the ATM side, e.g. optimised flight trajectories, seem to indicate that the industry is developing quickly
- Not only the aircraft but its operations are to be considered, bringing some challenges for the airports.

More remains to be done in this important area.

Panel 6: Space – the new frontier

Aviation development is increasingly intertwined with space technology innovation as exploitation of the exosphere presents a new outlook. Space offers a wide range of possibilities enhancing aviation safety, such as high-altitude operation, GNSS and more. The panel highlighted that

- Space was given high visibility at the EU level through the EU Space Programme. The EU Space strategy is focusing on space-based services such as Copernicus, Galileo and EGNOS; Space-based secure connectivity system and the latest developments on Space traffic management.
- The panel was the occasion to receive an update on the latest development from major space actors:
 - European Space agency on the IRIS project
 - Indra on ASD-B and VHF Space-Based solutions
 - the European Commission on Space Traffic Management
 - EUROCONTROL on High altitude operation

This is a domain of particular importance for EUROCAE, and it is already an item in our Technical Work Programme.

EUROCAE will evaluate all these conclusions and reflect with the Council and Technical Advisory Committee on possible future standardisation activities resulting from these discussions.

In addition, the event offered a great opportunity to see the signature of the Updated Memorandum of Cooperation between EUROCAE and SAE International, and to recognise the participation of experts who received the EUROCAE Awards for their invaluable contributions to standardisation activities in support of aviation.

The 2022 Award Winners are:

- Lifetime Achievement: David Bowen
- WG Leadership: Philippe Chauffoureaux
- Global Harmonisation: E. F. Charles (Chuck) LaBerge
- Best Contribution: Philippe Leplae
- International Award: Vaughn Maiolla
- President's Award: Jean-Marc Loscos

A special congratulations to all of them!

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