

2019 EASA-FAA International Safety Conference

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1 EASA-FAA International Safety Conference

The EASA-FAA International Safety Conference is a conference that has been taking place since 1983. At the time, the JAA (Joint Aviation Authorities, the predecessor to the EASA) and the FAA began to hold meetings with each other on the subject of aviation safety, leading to a gathering of a wide range of stakeholders including the authorities in other countries (such as Canada, Brazil, and Japan) as well as airline industry associations, aircraft manufacturers, and operators where ideas were exchanged and future visions shared.

Europe and the USA alternate hosting the conference, and this year it was held in Cologne, Germany for three days from June 12 to June 14. There were approx. 370 attendees from 40 countries.

Plenary and technical sessions were held in accordance with the overall conference agenda, and panel sessions were scheduled two at a time, therefore this report contains a summary of the attended panel sessions.

2 Conference details

2.1 FAA Highlights

FAA: Ali Bahrami, Associate Administrator for Aviation Safety

It is important to hold international exchanges and resolve similar challenges collaboratively.

With regard to specific details, it is important to continue improving the monitoring capabilities of the Flight Standard and maintain conditions that allow for laws and regulations to be adhered to. An unmanned aircraft system bill, which relates to night flights and flying over civilians,

was prepared and remote identification capabilities and LAANC (Low Altitude Authorization and Notification Capability) were provided with respect to the unmanned aircraft-related issues. Establishing a TAB (Technical Advisory Board) in all countries and continuing to improve transparency were considered high priorities. Moving forward, it is important for the authorities to provide support for technological innovation and improving international systems.

2.2 EASA Highlights

EASA: Patrick Ky, Executive Director

The EASA was established in 2002, reviewed in 2012, and then revised last year. The key points were that it would be a performance-based system and that risk-based monitoring would be carried out. Technological innovation was also important.

There were seven primary points of revision, namely, ① to establish a comprehensive budget for research and development and apply resources accordingly, ② allow even the EASA to issue type certificates for aircraft, ③ strengthen coordination between the authorities in all countries, ④ allow businesses to nominate the EASA as their monitor, ⑤ proceed with designing a system for unmanned aircraft, ⑥ carry out research to achieve harmonization with unmanned aircraft operators, and ⑦ create an environment that allows passengers to make decisions based on environmental impact and performance.

Over the next 15 years, they plan to promote standardization that includes software and electrically-powered aircraft, solve ATM air zone capacity problems, and extend BASA to other countries such as China.

2.3 Plenary A: Safety and the role of regulators in innovation

Alongside stakeholders such as aviation authorities, businesses want to further their understanding of new technological innovation, and move forward with their application. Thus, there is a need to be aware of the expertise, skills, and policies required for new technologies as quickly as possible. This approach will be implemented worldwide, so there is a need to achieve international harmony, which is synonymous with being able to establish an international standard.

There has been an increase in market participants which are not existing airline companies, as is the case with unmanned aircraft. In order to support this kind of technological innovation, allowing new market participants to participate in the safety culture of the airline industry is important for the system design, and exchanging ideas and sharing ultimate objectives would be key to achieving this.

In some cases, it might be beneficial to establish a flexible system based on industry standards to allow safety criteria that can accommodate future technological innovation.

2.4 Plenary B: The challenges of technology

As digital technology advances, aviation authorities and the aviation industry will both be able to achieve improved quality and industry processes, and their subsequent challenges. This would become more purposeful as collaboration and implementation methods progress, leading to changes towards a reality-based system design.

It will be important for stakeholders to acquire skills so that they can use this digital technology and allocate the required resources. It will also be important for the manufacturing of basic components to use this technology to move towards manufacturing components that are viewed together as a whole (including operations and infrastructure).

There has been an increasing number of cybersecurity threats alongside advances in communication technology and digital technology. These threats need to be systematically addressed through international efforts. Instead of being viewed on an individual basis, components should be managed as an overall system (including processes and training, etc.).

2.5 Panel 1: Automated flight deck

While flight deck automation has progressed, the

relationship between machines, humans, and safety is also key. The level of automation should be able to support humans so that the cockpit remains centered around human control. Although the goals of automation would be predicated on proper training, the goals should allow for the focus to be placed on important decisions while reducing the workload of crew.

System flexibility would be required to achieve this, and there would also be a need to adequately consider the balance between automation and pilot skills even if the system were to be predicated on proper training. Social acceptance is also required before the number of crew members can be reduced.

Aviation authorities would need to check systems for airworthiness, operability, and training to make further progress with automation, but either way, there will still be a need to guarantee the aircraft reliability by maintaining safety.

2.6 Panel 3: Effective oversight of SMS (Safety Management System)

The SMS must further evolve in accordance with the level of maturity of each country, particularly now there are various monitoring tools that can be used. Strengthening the approach of SMS is a process that should be continued after the required changes are implemented for dealing with safety culture, collaboration, and risk base. The creation of standards plays an important role in SMS initiatives even among industry groups, and this type of initiative is expected to continue moving forward as well.

Proper implementation of this type of SMS approach can achieve improved safety. Acquiring risk management skills and moving away from conventional methods of adhering to laws and regulations is a challenge for both the industry and the aviation authorities. Execution of and monitoring by the SMS can be even more effective if stakeholders share experience and data, improve reliability, and take global initiatives.

2.7 Panel 5: Challenges and opportunities with E-VTOL

E-VTOL development has reached maturity, and many E-VTOL are expected to be released into the market in the future. Initiatives to integrate aircraft (including unmanned aircraft) with formats different from those of

conventional aircraft are progressing, and these initiatives cover many aspects such as airworthiness, operability, and qualifications. Integration in airspace is also an important issue for actual flight.

These types of initiatives can successfully advance while achieving well balanced and adequate access to technological innovation, safety, and technology. It will therefore be important for businesses to work on this together with aviation authorities. It is important to establish a system that has leeway and flexibility to accommodate development at short notice.

2.8 Panel 7: Interoperability of aircraft between different oversight systems

In short, importing requirements would still differ between the aviation authorities of various countries even if international standards were set. There are differences in the way digital records are received and these differences are recognized as a future challenge. Aviation authorities face the challenge of how to quickly to evaluate airworthiness and allocate resources when accepting aircraft.

Furthermore, differences surfacing in the requirements of each country in the future are understood to be an inevitable challenge given the differences in each country's social background and situation. As there are also challenges associated with achieving global harmony through the use of ICAO and receiving digital records, there is also a need to establish initiatives that address these challenges. Equally, one means to allow the BASA to resolve problems such as unavoidable differences and the speeding up of evaluations by aviation authorities evaluations could be could be to establish initiatives that also address these issues.

2.9 Technical session: International collaboration on SMS and SSP (State Safety Program) implementation: The SM-ICG experience

SM ICG is an initiative that was established in 2009 to have the FAA, EASA, and TCCA (three authorities) drive the SMS and SSP. This has now expanded from just three authorities to 18 participating authorities around the world.

Until now, SMS and SSP guidance, evaluation tools, and definitions have been created with the goal of achieving a

common understanding around the terminology used with SMS and SSP, with such initiatives still ongoing. Promotional events are also ranked as important initiatives, and activities to improve awareness such as establishing an "Industry Day" to address various inquiries from businesses are also carried out in conjunction with these annual conferences.

Internationally-coordinated initiatives are extremely important for achieving safety goals, and there were also comments about expectations that there will be increased participation beyond the currently-participating 18 authorities as these initiatives continue to advance and receive feedback.

2.10 Plenary C: Looking forward - Ensuring the continued evolution of global aviation safety

There were proposals relating to how future international aviation safety conferences should be carried out after compiling the discussions at the conference.

The overall future plan was conveyed as ① continue exchanging ideas and information on issues that are being coordinated between the authorities at these meetings but focusing on more specific details instead, ② aim to further expand participation in these conferences, and ③ facilitate thorough networking and side meetings to allow for deeper discussion between aviation authorities and the industry.

It was also decided that working groups (concerning ① matters that should be focused on at the conference, ② evaluation of the associated benefits and drawbacks, and ③ consideration of the feasibility of increasing outreach, etc.) would be established within the next two months, and that activities would be carried out to submit the proposed details to the FAA and EASA by February 2020. There were comments about welcoming participation from all countries and not just the FAA and EASA with respect to the working groups.

2.11 The next international aviation safety conference

Next year's international aviation safety conference will be held in the USA. No specific information relating to the date or location of the next conference was provided at this conference.

References

The relevant conference page on the EASA website
<https://www.easa.europa.eu/newsroom-and-events/events/2019-easa-faa-international-aviation-safety-conference>