Remarks by the Council President of the
International Civil Aviation Organization (ICAO),
Mr. Salvatore Sciacchitano,
to the ECAC-Eurocontrol Event on Artificial Intelligence

(24 November 2021, Brussels)

Ladies and Gentlemen,

I wish to congratulate ECAC and Eurocontrol for having organized this timely event on Artificial Intelligence today.

For our specific sector, Artificial Intelligence is part of what we call Innovation in Aviation.

You may recall that ICAO Member States adopted Assembly Resolution A40-27 that, amongst other things, urges Member States that have experience in facilitating the introduction of innovation in civil aviation, and that have evolved their regulatory methods to better evaluate and assess the application of such innovations, to share their experience with other States through ICAO.

It directs the Council to assess the need to evolve the processes of the Organization, including its working methods with the industry in order to keep pace with innovations that affect the sustainable development of civil aviation. It also directs the Council to develop high-level policies in support of the introduction of innovation in aviation. And finally, it directs the Council to consider the establishment of a high-level body with the industry to regularly provide strategic advice to the Council concerning innovation in aviation.

All of these activities are underway and the Council will update the Assembly in September-October 2022 on such activities. Today's event is perfectly aligned with the spirit and substance of this ICAO Assembly Resolution.

Artificial intelligence is an area of great promise and potential, but also one where we must proceed with great caution, and with full attention to its many dimensions.

Recent social media developments have shown us, for example, that algorithms can sometimes generate outcomes well beyond the scope of their originators' intents.

In a world of opinions and newsfeeds this may be one thing, but for a complex global network which people trust to protect their lives, it is quite another.

Our coming together on this topic today, however, attests to the fact that machine-learning approaches are already of critical importance to many areas of human endeavour, and especially those engaged with Big Data.

The air transport sector devotes tremendous resources and focus to the reporting and collecting of data, and so there is an equally strong onus upon us to use the most advanced and cost-effective methods available to analyze and benefit from it.

We are also just at the dawn of an incredible new era of innovation in aircraft design and operation, with AI being seen as the fundamental backbone for key future capabilities in terms of autonomous flight and Unmanned Aircraft System Traffic Management (UTM), among many others.

Expectations for autonomous aircraft performing rapid and spontaneous trajectories in a congested environment are simply beyond the capability of traditional approaches.

The recent ICAO EUR/NAT Meeting of DGCAs has also highlighted the advantages that AI could bring in enhancing the aviation system preparedness and response to future crisis situations, in particular in support of regional and national contingency exercises.

These capabilities merely scratch the surface in terms of the much wider potential of Artificial Intelligence to augment aviation's present and enable its future. However, they still serve to make clear for us that AI will play a significantly growing role in aviation in the years ahead, and that the decisions and processes we adopt to manage and control its implementation are very important.

ICAO has therefore been encouraged to see both the tremendous potential of AI, and the need for a measured approach to its adoption, being so clearly reflected in the priorities set out in the recent 'Eurocontrol Fly AI Report' and the 'EASA AI Roadmap'.

This ambitious but prudent approach, in unison with the comprehensive global standards which will need to be adopted to govern future AI deployments, will be critical to our common and very important goal of assuring AI system safety and security, and to earning the public's full trust in aviation AI approaches.

Global rules in this area are furthermore not only relevant to international operations, but also to help establish common international approaches for domestic UTM. This is an important priority for the corporations and innovators now excelling in this area, a message they have made loud and clear at consecutive ICAO Drone Enable events.

This and many other factors point to the value we can realize by developing closer ICAO-Eurocontrol coordination on this topic.

Current research into aviation AI standardization, certification and development has been taken up by the European Organization for Civil Aviation Equipment (EUROCAE), and ICAO is participating in this Working Group and pursuing close cooperation with it through the Council's Air Navigation Commission, and the ICAO EUR/NAT Office in Paris.

All of this work is being guided by the MOU established between ICAO and the EUROCAE in 2017, part of a series of technical information sharing agreements we concluded at that time along with Society of Automotive Engineers (SAE International), Radio Technical Commission for Aeronautics (RTCA), and Aeronautical Radio Incorporated (ARINC).

Going forward we need to expand the AI tent to be even more inclusive, and take a much less traditional approach to assessing this entirely non-traditional aviation capability.

For example, having clearly defined Strategic Objectives is be extremely useful to focusing sectoral efforts and achieving important progress in aviation safety, security, efficiency and sustainability, but AI concerns touch on each of them very profoundly, and in inter-related ways, and that demands a less siloed, more holistic approach.

This is why ICAO is partnering in the UN 'AI for Good' annual global summit. We are also hosting internships, and developing in-house deep learning models showcasing natural language processing techniques for aeronautical information management as well as document summarization.

This is in addition to many other local initiatives where we are seeking to raise aviation AI priorities with universities, companies, governments and other incubators presently engaged in AI innovation.

In concluding, I wish to reassert the importance of developing an aviation foundation for AI implementation which meets every expectation of the travelling public for safety, security and privacy.

I also wish to see more intensive cooperation established between ICAO and Eurocontrol in this domain, and would suggest that European leadership in this area could help address the fact that ICAO Assembly Resolutions have yet to be adopted on this topic.

I wish you all an excellent exchange of views today and I wish to congratulate again ECAC and EUROCONTROL for organizing this event.

Thank you for your attention.

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