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Agenda Item 24: Aviation Safety and Air Navigation Priority Initiatives

ADDITIONAL ACTIVITIES NEEDED TO ENSURE AN EFFICIENT FF-ICE IMPLEMENTATION FOR AIRSPACE USERS

(Presented by the International Air Transport Association (IATA), International Federation of Air Line Pilots' Associations (IFALPA) and International Federation of Air Traffic Controllers' Associations (IFATCA))

EXECUTIVE SUMMARY

The 14th Air Navigation Conference highlighted the importance of ensuring a seamless transition towards flight and flow - information for a collaborative environment (FF-ICE). Several aspects need to be properly considered to ensure airspace users can receive all the information needed to create a trajectory as efficient as possible and consistently implement FF-ICE. If not properly addressed, airspace users' trajectories will be less than optimal and thus lead to more fuel uplift. In addition, if the FF-ICE services are not consistently implemented across the globe, airspace users flying globally will need to develop many different interfaces potentially leading to ambiguities and less than efficient handling of the trajectory.

Action: The Assembly is invited to:

- request ICAO to develop complementary provisions necessary to ensure a harmonized implementation of flight and flow - information for a collaborative environment (FF-ICE);
- urge ICAO to develop a comprehensive FF-ICE roadmap including aspects such as the provision of the relevant airspace constraints and detailed digital meteorological information along the flight trajectory to ensure minimal operational challenges to airspace users;
- request ICAO to ensure roadmap buy-in at the regional and national level; and
- request ICAO Member States to endorse and implement the FF-ICE roadmap.

<i>Strategic Goals:</i>	This working paper relates to the Strategic Goals <i>Every Flight is Safe and Secure</i> ; and <i>Aviation Delivers Seamless, Accessible and Reliable Mobility for All</i> .
<i>Financial implications:</i>	N/A
<i>References:</i>	AN-Conf/14 Recommendation 3.2/2 — Transition to flight and flow – information for a collaborative environment services and cessation of ICAO 2012 flight plan by 2034

¹ English, Arabic, Chinese, French, Russian and Spanish versions provided by IATA.

1. INTRODUCTION

1.1 The flight and flow information for a collaborative environment (FF-ICE) release 1 provisions that became applicable in November 2024, provide a new mechanism to exchange flight plan and flight plan related information while the existing flight plan 2012 format and distribution rules remained available.

1.2 The Fourteenth Air Navigation Conference (AN-Conf/14) recognized that keeping two formats for the exchange of flight plan was not a long-term solution. The Conference therefore agreed in Recommendation 3.2/2 — Transition to flight and flow – information for a collaborative environment services and cessation of ICAO 2012 flight plan by 2034 that the global cessation date of ICAO 2012 flight plan should be 2034. By that date, only FF-ICE should be used to exchange flight plan and flight plan related information.

1.3 Recommendation 3.2/2 also called for the development of national and regional implementation plans to transition to FF-ICE supported by ICAO provisions and guidance.

2. DISCUSSION

2.1 Pursuant to the outcomes of the AN-Conf/14, additional details would need to be addressed to ensure a seamless transition for airspace users.

2.1.1 Amending ICAO provisions to remove all references to flight plan 2012 does not guarantee that the implementation of FF-ICE is harmonized. The flight plan 2012 format as described in *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444) and transmitted over the aeronautical fixed telecommunication network (AFTN) follows a well-defined and understood set of rules. FF-ICE is meant to be exchanged following system-wide information management (SWIM). *Procedures for Air Navigation Services — Information Management* (PANS-IM, 10199) provides the principles to be followed for such exchanges including the need to adhere to an exchange format such as Flight information exchange model (FIXM). The information service overview described in PANS-IM is a discovery feature not a standard. There is therefore a need to explain how the FF-ICE services are to be built to ensure interoperability. This is meant to happen via information service definition developed for each FF-ICE service. The sooner those become available and explained to States, the higher the chances are that States will implement FF-ICE the same way. If not, airspace users will have to potentially adjust the way flight plans are delivered to each State as, for example, the FF-ICE filing service may be slightly different.

2.1.2 Regional planning is essential for a successful implementation of FF-ICE, but with the agreement for a flight plan 2012 cessation date in less than 10 years from now, it becomes crucial to provide education and training to all the States that did not participate to the ICAO provision development process so that they understand why they need to implement FF-ICE and why it is necessary to achieve the transition at the same time.

2.2 Airspace users and their flight planning system providers are investing to support the use of FF-ICE services as they see FF-ICE as an essential pillar to unlock trajectory-based operation (TBO) thanks to the availability of more flight information. But the benefits can only be reaped if States make use of that additional information and consistently throughout the flight. Airspace users flight duration increases with the latest generation of long-haul aircraft, but the fuel efficiency that comes with those aircraft may be

negated if air navigation services providers (ANSPs) flight planning systems cannot properly make use of the planned trajectory changes, such as flight level and route adjustments, where and when needed.

2.3 Transitioning to FF-ICE is not just a change of format, it is also about providing via the flight plan, aircraft trajectory which have been carefully crafted from departure to arrival assuming ANSPs flight planning system throughout the flight can handle trajectories expressed as a list of lat-long and not waypoint and route names as is the case today. This list is meant to be the result of a pre-departure negotiation between the airspace user and the ANSPs through automation. Without such negotiation or an incomplete one, the airspace user trajectory optimization may be jeopardized. At the regional level, it is therefore important that the implementation of FF-ICE is planned so as to include not only the acceptance of FF-ICE services instead of FPL2012 messages, but also the necessary ANSPs automation systems adaptation to provide feedback during the pre-departure negotiation and the use of the addition trajectory information contained in the FF-ICE trajectory so that the planned flight efficiency can be granted.

2.4 An optimized flight trajectory is the result of many factors including a better knowledge of all the constraints that may affect the flight, be they airspace or meteorology related. It is therefore important for ANSPs and meteorological information providers to provide the airspace and weather information in a digital format so that it can be effectively used by the airspace users flight planning systems. Airspace users embraced FF-ICE with the belief that all constraints would be made known to them prior to departure thanks to the new FF-ICE services, allowing them to optimize the trajectory and the fuel embarked. Each overflown ANSP unable to provide such information forces airspace users to create a trajectory based on the known AIP instead of the latest airspace situation leading to a less efficient flight as more fuel embarked is usually the result of unknown airspace conditions. This also means that ANSPs overflown several hours after departure should be able to analyze the proposed flight plan pre-departure and not close to the flight reaching their boundary.

2.5 The above examples demonstrate that, without additional work from ICAO and proper understanding by States of the need to not only accept the new flight plan format but also adapt their automation systems, airspace users will not get the benefits that FF-ICE are due to generate. In addition, ICAO should develop a comprehensive roadmap including FF-ICE related tasks as well as complementary activities such as the deployment of the necessary communication infrastructure or a means to provide the latest airspace constraints preferably via an ATFM capability. This roadmap should be shared with and endorsed by States.

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