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Agenda Item: B.4.1.6 **INFORMATION PAPER** **WP No:81 IFTACA'26**

International Civil Aviation Organization (ICAO) Flight Operations Panel (FLTOPSP)

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SUMMARY

This Information Paper presents a report about the activities carried by the ICAO Flight Operations Panel (FLTOPSP) in 2025 after the Abu Dhabi (U.A.E.) 64th IFATCA Conference.

1. INTRODUCTION

1.1. ICAO's work on updating Annexes, PANSs, Manuals, Circulars and Docs or on the development of new ones is provided through the Air Navigation Commission (ANC) which forwards Job Cards (JCs) to the several Panels that were established for this purpose.

1.2. IFATCA has its own representative in many of these Panels, their Working Groups and Sub-Groups.

1.3. The Flight Operations Panel (FLTOPSP) is mainly focused on keeping Annex 6 "Operation of Aircraft" and Doc 8168 (PANS-OPS "Aircraft Operations") up to date with all relevant new developments and to provide advice to other Panels about flight operations and aircraft management. This work is being carried with the support of other Sub-Groups of experts.

1.4. After the 64th IFATCA 2024 Conference, there have been three meetings. I attended the first and the third which were held in Montreal. I could not join the second meeting held in Brazil in June.

1.5. The following is the list of the items discussed during the 2025 FLTOPSP meetings:

• Competency-Based Training and Assessment (CBTA) implementation for all licences
• Automation dependency
• Disabled aircraft removal
• LED lights
• Runway starter extension
• Language proficiency
• Accident and incident reporting
• Dangerous goods
• Procedure design gradient
• PBN Manual (Doc 9613)
• Performance-based Aerodrome Operating Minima (PBAOM)
• Update the Manual on the Implementation of the Security Provisions for Annex 6 (Doc 9811)
• Ramp Inspections
• Use of electronic certificates and other documents
• Restructure and review of PANS-OPS, Volume III
• Review and revision of the Manual of All-Weather Operations (MAWO) to advance helicopter specific guidance
• Development of Annex 6 Part III Provisions for Additional/Technical Crew Member
• Development of helicopter specific safety risk management
• Areas of authorized operations
• RSOTI-Technology for runway safety (on-board equipment)
• Airship

• Improving helicopter safety and security job card
• Global Aeronautical Distress and Safety System (GADSS)
• Flight operations in the presence of volcanic contamination
• Proposed amendments to Annex 1, Annex 6 and PANS-TRG related to CBTA and FOO/FD
• VNRS Concept and Its Use in the Context of SST LTO SARP
• Introduction of a new Aircraft Volcanic ash Encounter Report (AVER) form
• Use of electronic or digital documents
• Effective Crew Resource Management (CRM) training
• Update on Job card FLTOPSP.044 PBAOM related to Runway Classification Group (RCG)
• Mitigation of altimeter setting errors
• Progress update from the Cold Temperature Correction Working Group (CTC WG)
• Safe transport of Dangerous Goods
• Development of Annex 6 Part III Provisions for Additional/Technical Crew Member
• Wake Energy Retrieval (WER) Operations
• Minor amendments from the Flight Recorder Specific Working Group (FLIRECSWG)

1.6. Some of the topics from the January 2025 FLTOPSP meeting have been already reported during the 64th IFATCA conference.

1.7. While many discussions within FLTOPSP cover flight procedures that do not involve ATM, those topics that indeed affect Air Traffic Services are reported here. All other material has been anyway previously forwarded to the EB and may be consulted upon request.

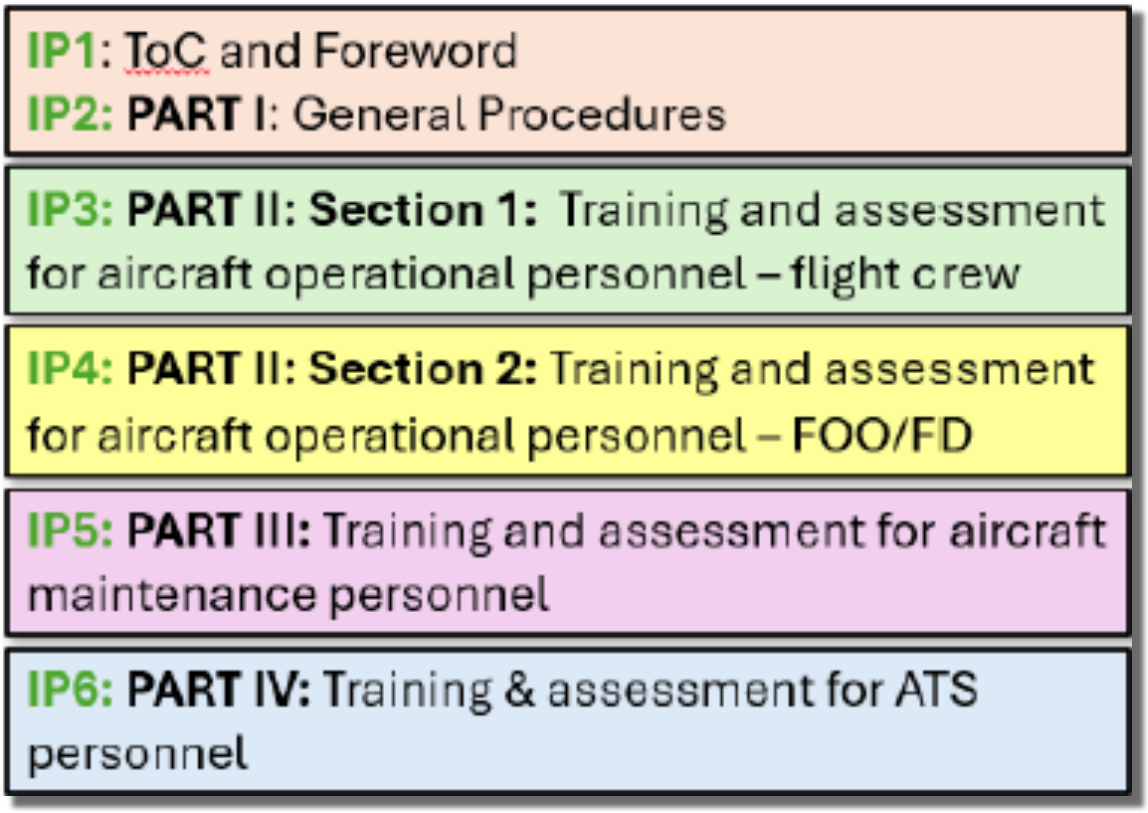
1.8. All the pictures hereby shown are abstract from the FLTOPSP WPs and do just represent proposals of amendment to existing regulations. Unless specifically stated, they do not represent actual operational and/or authorized procedures.

2. DISCUSSION

2.1. Proposed amendments to Annex 1, Annex 6 and PANS-TRG related to CBTA and Flight Operations Officer/Flight Dsipatcher (FOO/FD)

2.1.1. The Personnel Training and Licensing Panel (PTLP) is developing Proposals for Amendments (PfA) for ICAO Annex 1 – Personnel Licensing and PANS-TRG (Doc 9868) to improve and facilitate the harmonized implementation of Competency-Based Training and Assessment (CBTA) for all personnel licenses including ATCOs.

2.1.2. The areas of direct interest to FLTOPSP are those regarding flight crews and FOO/FD, but out of that the document covers ATS personnel as well, as shown down here in Part IV:



2.1.3. Many additions will be included in both Annex 1 Licensing (as seen in the two following pictures) and in the PAN TRG (Doc 9868) like SMS concepts, Stress & Fatigue, Human Factors/Human Performance and TRM aspects. The licensing list will now include ATC On-the-Job Training Instructor (OJTI) too.

2.1.4. The PfA includes some additional restriction on the use of Simulation Training Device (STD) when it comes to the use for assessing the acquired controllers' skills.

4.4 Air traffic controller licence

4.4.1 Requirements for the issue of the licence

Before issuing an air traffic controller licence, ~~a Contracting~~ each State shall require the applicant to meet the requirements of 4.4.1 and the requirements of at least one of the operational air traffic controller ratings set out in 4.5. Unlicensed State employees may operate as air traffic controllers on condition that they meet the same requirements.

Origin:	*Rationale:*
PTLP	4.4.1 is amended consequential to the addition of the ATC OJTI rating, to ensure its applicability remains unchanged, and to refer to State for editorial consistency and correctness.

4.4.1.1 *Age*

The applicant shall be not less than ~~2~~18 years of age.

Origin:	*Rationale:*
PTLP	4.4.1.1 is amended to align with the minimum age requirement to be issued a CPL which is considered to require a similar level of maturity and responsibility.

4.4.1.2 *Knowledge*

The applicant shall have demonstrated a level of knowledge appropriate to the holder of an air traffic controller licence, in at least the following subjects:

Air law

a) purpose and function of relevant international and national aviation organizations;

~~a~~b) rules, ~~and~~ regulations and aeronautical information products relevant to the holder of an air traffic controller licence; privileges of an air traffic controller licence; rules of the air; altimeter setting procedures;

c) safety management concepts in ATS;

Air traffic control equipment

~~b~~d) principles, use and limitations of ~~equipment used in air traffic control~~ voice communication, data link communications, and ATS surveillance systems;

e) overview of the equipment used in air traffic controller working positions (aerodrome, approach, and area control);

f) ground-based safety nets;

Origin:	*Rationale:*
PTLP	4.4.1.2 d) is amended and e) and f) are added to provide more detailed requirements that ensure a common basic understanding of the air traffic control systems and equipment used globally, nationally, and locally. Shared understanding enhances more effective coordination between working positions and between ATC units.

Aircraft ~~G~~general knowledge

~~e~~g) principles of flight; principles of operation and functioning of aircraft and RPAS, engines and systems;

h) aircraft performance relevant to air traffic control operations and factors affecting aircraft performance;

i) aircraft wake turbulence categories and groups;

j) airborne safety nets;

Origin:	*Rationale:*
PTLP	The subtitle "General knowledge" is amended to better reflect the content. 4.4.1.2 e) is amended and i) and j are added to ensure that air traffic controllers understand the specific aspects of aircraft systems and performance that directly affect, and that are directly affected by, the provision of air traffic control services.

Human performance

~~d~~k) health and well-being, stress and fatigue, and their effects on human performance ~~including principles of TEM~~;

l) TRM concepts;

Note.— Guidance material to design training programmes on human performance~~, including TEM,~~ can be found in the Human Factors Training Manual *(Doc 9683). Guidance material to design training programmes to incorporate TRM for air traffic controllers can be found in the* Manual on Air Traffic Controller Competency-based Training and Assessment *(Doc 10056), Volume I and guidance on the incorporation of TRM in training programmes can be found in the* Manual on Human Performance (HP) for Regulators *(Doc 10151).*

2.1.5. As the OJTI has been included as new license item, a new section will be added "*Requirements for the ATC OJTI rating*".

2.2. Proposal for amendments of annex 6 in line with revised Performance-Based Airport Operating Minima (PBAOM) Concept

2.2.1. Modern aircraft are increasingly equipped with additional systems like HUD, vision systems or auto-land. These aircraft can safely operate to lower RVR and/or DH or operate to traditional minima with less reliance on ground facilities. The higher performance capabilities of improved airborne equipment have mitigated some of the performance requirements of the ground-based navigation equipment.

2.2.2. The concept of Performance Based Aerodrome Operating Minima (PBAOM) allows for a more flexible approach as the minima will be predicated upon the combined capabilities of the ground and airborne facilities. The intention, however, is not to change the existing standards for aerodromes because those will still be needed for the aircraft without additional equipment.

2.2.3. To render performance criteria technology neutral and incorporate PBAOM concepts, the first identified action was to update runway definitions in Annex 14 and therefore the Runway Classification Group, an inter-panel coordination group between IFPP, ADOP and FLTOPSP was set up.

2.2.4. Besides, the All-Weather Operations (AWO) subgroup has reviewed Annex 6 Part I, II and III to identify possible missing elements. The AWO subgroup concluded that the current version of Annex 6 Part I, II and III generally support the revised PBAOM concept, but still needs some clarifications). A question remains unanswered: Is there a need to detail criteria to established Aerodrome Operating Minima also for general aviation?

2.2.5. Considering the Proposal for Amendment (PfA) in Annex 14 related to the runway definitions under discussion within the Runway classification group (RCG), the type A and type B operations might be removed from Annex 6.

2.2.6. In determining the requirements, the State of the Operator shall require the operator to take full account of several items like the type, performance and handling characteristics of the aircraft, the composition and experience of the flight crew, the dimensions and characteristics of the runways and many other aspects. No mention was put on the type of air traffic service provided on that airport. When I asked to add it, the chairman stated that, as Annex 6 covers only flight operations and requirements, no ATM service specification is needed. Other documentation will be adapted in relation to this topic.

2.3. Update on PBAOM related to Runway Classification Group (RCG)

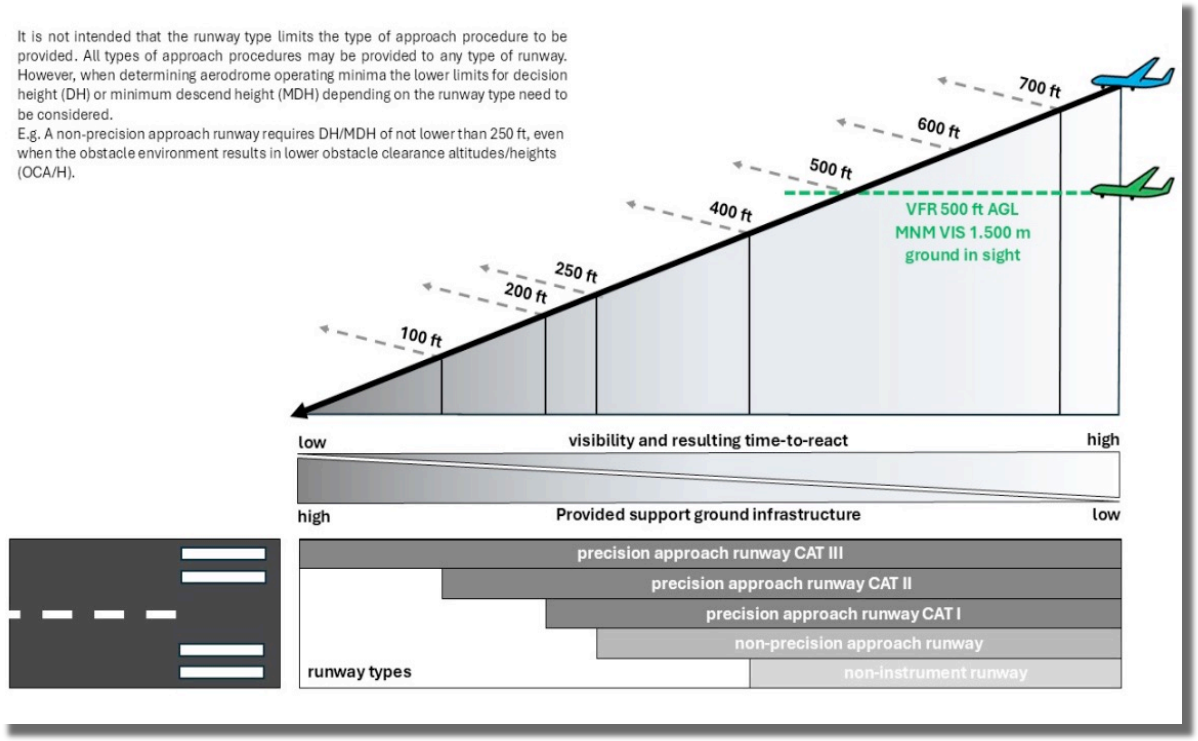
2.3.1. The Runway Classification Group (RCG) is a multi-disciplinary group created from participants to the Aerodrome Operations Panel (ADOP), FLTOPSP, and IFPP. It constitutes a forum for consultation, co-ordination and the exchange of information between stakeholders on activities related to developing Standards and Recommended Practices for the use of PBAOM by separating operational, infrastructure and procedure design aspects in the realm of approach, landing and guided take-off operations and the related systems.

2.3.2. The RCG shall develop runway definitions that do not limit the operation of aircraft and support the principles of PBAOM in a manner that instrument approaches can be designed to runways without any navigation ground infrastructure (e.g. RNP approaches to non-instrument runways), or with reduced infrastructure requirements (such as Cat I).

2.3.3. The RCG developed proposals to change the definition of instrument and non-instrument runways.

2.3.4. There's still no consensus on the right way to define instrument Runway and Non-instrument Runway.

2.3.5. Even though there are no agreed international regulations, many states apply the 500ft minima, as for VFR minima, to define a non-instrument Rwy like the picture that follows:



2.3.6. To assist RCG to finalize its tasks, FLTOPSP was requested to answer following questions:

1. With similar conditions, is it preferable to fly circling procedures or straight-in procedures?
2. With similar conditions, is it preferable to change the flight rules from VFR to IFR on departure, and from IFR to VFR during approach, or is it preferable to maintain within one set of flight rules?
3. Regarding the declaration of a limited RWY-infrastructure, is it preferable to declare:

a) a non-instrument RWY with additional features such as visual and non-visual aids or

b) a non-precision approach RWY with mitigation measures from perspective of the aerodrome?

2.3.7. As a matter of fact, the PBAOM still covers a great interest at all ICAO levels but fails to adhere to every domain requirement.

2.4. Wake Energy Retrieval (WER) Operations

2.4.1. Wake Energy Retrieval (WER) operations in cruise, applied to airplanes engaged in international commercial operations, can enable significant fuel savings and associated CO_2 emission reduction without additional ground infrastructure or airborne sensors.

2.4.2. The principle relies on an aircraft harvesting a part of the energy from the wake vortex generated by a leading airplane, by taking advantage of the lift afforded by the updraft energy inherent in the wake.

2.4.3. In November 2021, an operational flight trial in General Air Traffic, across the North Atlantic airspace, from Toulouse (LFBO) to Montreal (CYUL), was performed with French, UK, and Canadian ATC support. These first two transatlantic flights demonstrated the efficiency of the technology, with approximately 5% fuel saving for the follower flight confirmed.

2.4.4. Demonstrating and confirming the integration of the pairing process up to the Rendez-vous. As of October 2025, flight trials are successfully being conducted, validating the procedures allowing an aircraft that has already departed to modify its trajectory to join one of another aircraft and reach a meeting point in a common targeted time window.

2.4.5. Validating procedures for ATC to support safe pairing of aircraft, execution and splitting of the pair are ongoing. Communication principles have been agreed upon, and a proposed dedicated phraseology has been established. This phraseology will need to be supported by data-link messages, so new messages will need to be added to the CPDLC standard.

2.4.6. SESAR JU is producing a Standardization and Regulation impact analysis identifying impacts on current documentation but also needs new documentation.

2.4.7. The following documents have been considered:

- Annex 2 - Rules of the Air,
- Annex 6 - Operation of Aircraft,
- Annex 8 - Airworthiness of Aircraft,
- Annex 10 - Aeronautical Telecommunications,
- Annex 11 - Air Traffic Services,
- PANS ATM - Document 4444,
- ACAS - Document 9863,
- ICAO Document 7030 - Supplementary Regional procedures,
- NAT Doc 007 - Version 2024-1 applicable from March 2024 / North Atlantic Operations and Airspace Manual, Edition 2024, effective from 21 March 2024.

While some need to be created:

- WER Manual,
- Guidance for special approval for flight crew.

2.4.8. Even though it was an Information Paper, the topic will raise more importance in the future and must be followed as ATC involvement is clear. The present trials were followed with a 1.2 NM spacing in-between aircraft! As for my request regarding ATC aspects, clear procedures must be set, and responsibilities must be defined.

2.4.9. At present the procedure uses onboard technology which relies upon ADS-B and GNSS which have been proven to be weak against cyberattacks or space weather influence.

2.5. Baro-VNAV Altimeter setting issues

2.5.1. As for latest IFATCA-TOC works, FLTOPSPS raised the attention on incorrect altimeter settings when approach is being followed through barometric altimeter setting.

2.5.2. No WP was provided but just a presentation and it depicted very clearly the problems connected to a wrong setting.

2.5.3. I suggested FLTOPSP starts advocating the need to deploy the Mode-S Enhanced Surveillance System (EHS) which downloads other parameters than just IAS, MN, selected altitude, heading and vertical rate but also the selected Pressure setting to ATC.

2.6. True North Advisoy Group (True-AG) update

2.6.1. Scope of the Advisory Group (AG) is to assist ICAO in developing framework for global transition to True North.

2.6.2. States and ANSPs usually follow ICAO Docs updating magnetic variation according to the 5-year Ensemble Prediction of Oceanic Convective Hazards (EPOCH) models but no mandate exists to keep aircraft system magnetic variation table current. There are discrepancies between air and ground about guidance for magnetic variations.

2.6.3. So, the options to harmonize all are:

- Moving to True North (TN) (it would set a “Onetime” solution all at once everywhere but has been already recognized as hardly deliverable),
- Phased approach 1: first change extreme latitudes and then moving in time towards central ones,
- Phased approach 2: develop transition plan (global, regional, state),
- Keep magnetic variation tables updated and no further training or change,
- Hybrid approach (keep MagVar tables updated and change to TN in the future).

2.6.4. Definition of aircraft will probably be defined according to the TN capability as follows:

- Not True Capable (only magnetic avionics provided crews can always do the computation to convert into TN),
- True Capable,
- True Capable with restrictions,
- True Native (no dependencies on a magnetic reference at all).

2.7. Progress update from the Cold Temperature Correction working group (CTC WG)

2.7.1. All the most recent suggestions have been anyway carried out and are now in the consultation process by the ANC that would start the development of the relative State Letter soon.
2026 is the determined consultation year while the adoption will be between 2027 and 2028.

3. CONCLUSION

3.1. PANS-TRG is being updated including extending the regulatory framework to some new figures like OJTIs and including important aspects like Human Factors/Human Performance (HF/HP) and Team Resource Management (TRM).

3.2. Wake Energy Retrieval (WER) is becoming a reality. Airplane will fly as close as just 1.2NM to reduce the air inducted drag and save fuel.

3.3. While the much-discussed CTC topic seem to have been finalized, the other major topic, PBAOM, still sees the difficulties of inter-domain harmonization. From an inflight perspective it’s easy to define the various minima upon the aircraft equipment. On the other hand, the ground infrastructure, shows all its limits when there’s the need to give a clear definition of instrument runway and non-instrument runways.

4.RECOMMENDATIONS

4.1.It is recommended that this report be accepted as an information paper.

~ End of report ~

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