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# CIV-MIL and ASBU Interception

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*ICAO*



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# Outline

- ASBU-FRTO Benefits and Challenges
- B0-FRTO in MID Region
- GANP/ASBU 2019
- Interception



## Free-Route Operations (FRTO)

### Benefits:

- ✓ Applicable to en-route and terminal airspace.
- ✓ Benefits can start locally.
- ✓ The larger the size of the concerned airspace the greater the benefits, in particular for flex track aspects.
- ✓ Benefits accrue to individual flights and flows.
- ✓ Application will naturally span over a long period as traffic develops.
- ✓ Its features can be introduced starting with the simplest ones.

### Challenges

- ❖ Complicated Airspace Structure
- ❖ Effective means for Sharing of Information
- ❖ Large military airspaces
- ❖ Security/unrest political situation
- ❖ Identification of specific routes to be implemented through the segregated airspace



## B0-FRTO (MID Region)

### *B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories*

| Elements   | Applicability | Performance Indicators/Supporting Metrics  | Targets | Timelines |
|--|---------------|--|---------|-----------|
| Flexible Use of Airspace (FUA) Level 1 Strategic | All States    | Indicator: % of States that have implemented FUA Level 1<br><br>Supporting metric*: number of States that have implemented FUA Level 1 | 50%     | Dec. 2019 |
| FUA Level 2 Pre-tactical                         | All States    | Indicator: % of States that have implemented FUA Level 2<br><br>Supporting metric*: number of States that have implemented FUA Level 2 | 60%     | Dec. 2020 |
| FUA Level 3 Tactical                             | All States    | Indicator: % of States that have implemented FUA Level 3<br><br>Supporting metric*: number of States that have implemented FUA Level 3 | 60%     | Dec. 2022 |



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The 40th Session of the Assembly endorsed the 6<sup>th</sup> Edition of GANP and new ASBU framework

ICAO established the GANP Portal to support States with the implementation





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24 September – 4 October 2019  
Montreal, Canada

The 40th Session of the Assembly endorsed the 6<sup>th</sup> Edition of GANP and new ASBU framework

ICAO established the GANP Portal to support States with the implementation <https://www4.icao.int/ganpportal/>

| DELEGATIONS          |            |
|----------------------|------------|
| Member States        | 184        |
| Observer Delegations | 55         |
| <b>Total</b>         | <b>239</b> |

| DELEGATES            |      |
|----------------------|------|
| Member States        | 2015 |
| Observer Delegations | 387  |
| Special Guest        | 1    |

| MEDIA/PRESS  |             |
|--------------|-------------|
| MEDIA/PRESS  | 23          |
| <b>Total</b> | <b>2426</b> |



## GANP 2019 KPIs

| KPA             | Efficiency   |  |                                   | Capacity   |  | Predictability   |                                      |
|-----------------|--|--|-----------------------------------|--|--|--|--------------------------------------|
|                 | Focus Area(s)  | Additional flight time & distance  | Vertical flight efficiency        | Additional fuel burn   | Capacity, throughput & utilization   | Capacity shortfall & associated delay                                  | Punctuality                          |
| Core KPIs       | <b>KPI02</b> Taxi-out additional time<br><b>KPI13</b> Taxi-in additional time  |  |                                   | <b>KPI09</b> Airport peak arrival capacity<br><b>KPI10</b> Airport peak arrival throughput   |  | <b>KPI01</b> Departure punctuality<br><b>KPI14</b> Arrival punctuality | <b>KPI15</b> Flight time variability |
| Additional KPIs | <b>KPI04</b> Filed flight plan en-route extension<br><b>KPI05</b> Actual en-route extension<br><b>KPI08</b> Additional time in terminal airspace | <b>KPI17</b> Level-off during climb<br><b>KPI18</b> Level capping during cruise<br><b>KPI19</b> Level-off during descent | <b>KPI16</b> Additional fuel burn | <b>KPI06</b> En-route airspace capacity<br><b>KPI11</b> Airport arrival capacity utilization | <b>KPI07</b> En-route ATFM delay<br><b>KPI12</b> Airport/Terminal ATFM delay | <b>KPI03</b> ATFM slot adherence                                       |                                      |



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The ATM SG/5 meeting (Aqaba, Jordan, 1-4 December 2019) meeting initiated the discussion on the future planning of ASBU implementation in the MID Region related to ATM taking into consideration the Sixth Edition of the GANP and the new ASBU framework.

The ATM SG/5 meeting encouraged States and stakeholders to participate in the ACAO/ICAO (EUR/NAT and MID) ASBU Symposium that will be held at the ICAO MID Office in Cairo, Egypt, from 9 to 12 March 2020.







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# Interception





## ICAO Annex 2 (Rules of the Air)

### ➤ Art 3.8 (and Attachment A) Interception of Civil Aircraft

3.8.1 Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by Contracting States in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft. Accordingly, in drafting appropriate regulations and administrative directives due regard shall be had to the provisions of Appendix 1, Section 2 and Appendix 2, Section 1.

*Note. — Recognizing that it is essential for the safety of flight that any visual signals employed in the event of an interception which should be undertaken only as a last resort be correctly employed and understood by civil and military aircraft throughout the world, the Council of the International Civil Aviation Organization, when adopting the visual signals in Appendix 1 to this Annex, urged Contracting States to ensure that they be strictly adhered to by their State aircraft.....*

3.8.2 The pilot-in-command of a civil aircraft, when intercepted, shall comply with the Standards in Appendix 2, Sections 2 and 3, interpreting and responding to visual signals as specified in Appendix 1, Section 2.



## ICAO Annex 11 (Air Traffic Services)

➤ Art 2.18 Coordination between military authorities and air traffic services

2.18.1 Air traffic services authorities shall establish and maintain close cooperation with military authorities responsible for activities that may affect flights of civil aircraft.

2.18.2 Coordination of activities potentially hazardous to civil aircraft shall be effected in accordance with 2.19.

2.18.3 Arrangements shall be made to permit information relevant to the safe and expeditious conduct of flights of civil aircraft to be promptly exchanged between air traffic services units and appropriate military units.

2.18.3.1 and 2.18.3.2 with further details on data provision and special procedures for information exchange in order to avoid an interception.



## ICAO Annex 11 (Air Traffic Services)

➤ Art 2.19 Coordination of activities potentially hazardous to civil aircraft

2.19.1 The arrangements for activities potentially hazardous to civil aircraft, whether over the territory of a State or over the high seas, shall be coordinated with the appropriate air traffic services authorities. The coordination shall be effected early enough to permit timely promulgation of information regarding the activities in accordance with the provisions of Annex 15. (Recommendations)

2.19.2 The objective of the coordination shall be to achieve the best arrangements which will avoid hazards to civil aircraft and minimize interference with the normal operations of such aircraft. (Recommendations)

2.19.3 The appropriate ATS authorities shall be responsible for initiating the promulgation of information regarding the activities.

2.19.4 Recommendation.— *If activities potentially hazardous to civil aircraft take place on a regular or continuing basis, special committees should be established as required to ensure that the requirements of all parties concerned are adequately coordinated.*



## ICAO Annex 11 (Air Traffic Services)

- Art 2.19 Coordination of activities potentially hazardous to civil aircraft

2.19.5 Adequate steps shall be taken to prevent emission of laser beams from adversely affecting flight operations

2.19.6 Recommendation.— *In order to provide added airspace capacity and to improve efficiency and flexibility of aircraft operations, States should establish procedures providing for a flexible use of airspace reserved for military or other special activities. The procedures should permit all airspace users to have safe access to such reserved airspace.*

- Art 2.25 In-flight Contingencies

2.25.1 Strayed or unidentified aircraft

- Attachment C - Contingency Plans



## ICAO Doc 4444 (PANS Air Traffic Management)

### ➤ 16.1 RESPONSIBILITY IN REGARD TO MILITARY TRAFFIC

16.1.1 It is recognized that some military aeronautical operations necessitate non-compliance with certain air traffic procedures. In order to ensure the safety of flight operations the appropriate military authorities shall be asked, whenever practicable, to notify the proper air traffic control unit prior to undertaking such manoeuvres.

16.1.2 A reduction of separation minima required by military necessity or other extraordinary circumstances shall only be accepted by an air traffic control unit when a specific request in some recorded form has been obtained from the authority having jurisdiction over the aircraft concerned and the lower minima then to be observed shall apply only between those aircraft. Some recorded form of instruction fully covering this reduction of separation minima must be issued by the air traffic control unit concerned.

16.1.3 Temporary airspace reservation, either stationary or mobile, may be established for the use of large formation flights or other military air operations. Arrangements for the reservation of such airspace shall be accomplished by coordination between the user and the appropriate ATS authority. The coordination shall be effected in accordance with the provisions of Annex 11 and completed early enough to permit timely promulgation of information in accordance with the provisions of Annex 15.



## Key Point

Considering that no **compromise** when it comes to **sovereignty** or **security** of **national** airspace. Nevertheless, effective **coordination** between **Civil** and **Military** through sharing of required information via adequate means and implementation of reasonable measures would support in **avoiding** the need for **interceptions**.

Accordingly, reducing **SAFETY RISKS**.

**IN ALL CASES SAFETY OF CIVIL FLIGHTS SHOULD IS PARAMOUNT**



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