

ICAO EUR/MID Radio Navigation Symposium

Flight Inspection in 2024: the need for efficiency

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Elements of the discussion

01

Changing scenario

NAVAIDs dismissal programs

02

The raise of Validation

From 0 to 50/50 to...

03

The airspace dilemma

Flight Inspection disrupts (in part)
ATM/ATC

04

Strategic value

NAVAIDs are still needed

05

A peak into the future

The absolute need for efficiency

01

Changing scenario

1. Many States are implementing NAVAIDs reduction programs
2. The navigation infrastructure relies on GNSS and to a more limited extent on RNAV DME-DME
3. This is a cost saving measure that has an impact on flight inspection service providers
4. The business paradigm is shifting to integrate validation as an equal generator of revenues
5. There is a need to be extremely efficient



02

The raise of validation

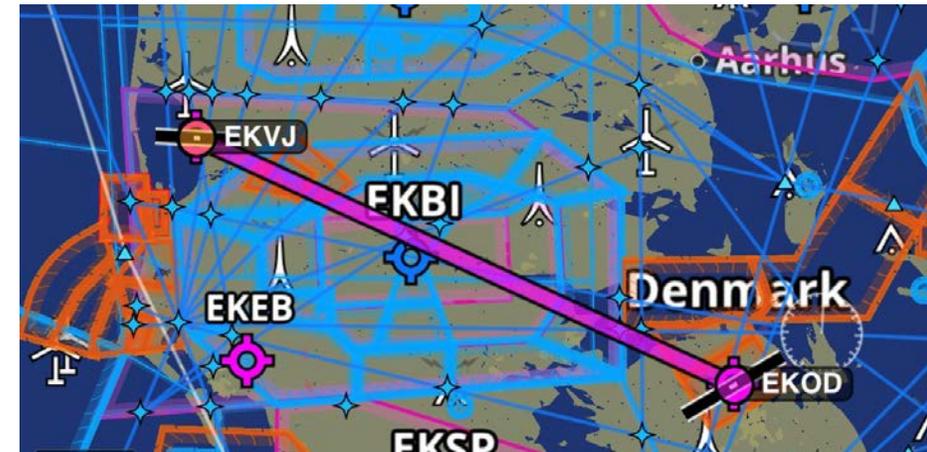
1. From its publication in 2012 the ICAO DOC 9906 has changed the industry
2. Instrument flight procedure validation is now an important part of the work and will probably become predominant in the foreseeable future
3. Flight inspection service providers that have not changed their operations to include validation may face existential issues in few short years
4. Validation needs qualified and competent people to be performed, and flight inspection service providers have the human capital required to adapt their business model



03

The airspace dilemma

1. Airspaces are becoming more complex; air traffic has increased to above pre-pandemic levels in many areas of the world, and flight inspection is a notable disruption to the orderly flow of traffic for ATC
2. Usage of the airspace by the flight inspection aircraft should be reduced to the very minimum
3. Over the years efficiency of flight inspections operation has increased due to technological advances of the FISs and due to better operational practices
4. Nevertheless, this might not be enough and other venues are under exploration, like integrating flight inspection RPAS and flight inspection aircraft
5. This approach may solve certain problems, but may also create new problems, and the research is still ongoing



04

Strategic value

1. Flight inspection has strategic values for every State, providing assurance that the navigation infrastructure can handle the needs of modern air travel
2. Access to a flight inspection aircraft is of paramount importance to maintain the required level of safety in the domain of air operations
3. At least a basic infrastructure of conventional NAVAIDs should be retained to cope with GNSS vulnerabilities (jamming, spoofing, etc.)
4. If there is a lesson that the current geopolitical situation can teach to the aviation domain, it is that being over-reliant on GNSS may cause a total breakdown of navigation capability within a huge area. ILSs, VORs and DMEs will still play an important role in the foreseeable future



05

A peak into the future

1. Integration of ground monitoring with RPAS flights and flight inspection aircraft operations will increase, especially at congested airport, where flight inspection can be a disruption of the flow of commercial traffic
2. The quality of the new generation of NAVAIDs may allow to expand the periodicity requirements for non-critical installation (VOR, DME, ILS CAT I)
3. At one point in the future IFP validation will surpass flight inspection in terms of flight hours flown, we are almost there
4. New developments in technology may shift the attention of the flight inspection service providers towards obstacle evaluation (with LIDAR or other technologies), approach and RWY lights evaluation (already a requirement). This is on top of flight validation and flight inspection
5. Efficiency is not only realized in the air but also on the ground, with better reporting systems and supporting IT infrastructure for the collection and processing of flight inspection data and dissemination of the reports



Thank You!