

World ATM Congress

Experts request new solutions to tackle volatility in ATM

Experts from six European Functional Airspace Blocks (FABs) – incorporating BALTIC FAB, BLUE MED FAB, DANUBE FAB, FABCE, FABEC, SW FAB and the Performance Review Unit (PRU) / EUROCONTROL – met at the World ATM Congress in Madrid on 6 March 2018 to discuss the following issue at the InterFAB panel: “Volatility in ATM: Cases, challenges, solutions”. The panel was supported by FAB DK-SE.

The panel was based on a system view provided by the PRU and case studies from all FABs. Participants agreed that volatility has evolved from a single phenomenon to one impacting the aviation system overall, which has to be taken seriously and will require further analysis.

The case studies demonstrated the complexity and the multidimensionality of the issue of volatility in air traffic management (ATM). The underlying causes are varied: ranging from geopolitical conflicts, impact of climate change, new and diverging business models of airspace users up to tactical aspects, such as individual flight planning or unexpected and short-term changes of sector loads.



The discussion in Madrid focussed on two main points. Firstly, the panel raised the question of why volatility had become such a pressing issue now – after all, changes in traffic flows were experienced in the past as well. Secondly, the panel was looking for solutions or ways to handle volatility in future planning and operations – without using volatility as an excuse for underperformance.

The panel agreed that the main driver of volatility is the complex interaction of new external factors, such as uncertain geopolitics, the unpredictable impact of climate change and new business models by airspace users. Due to a rigid economic regulatory system, cost pressures have led to a reduction in the capacity surplus provided by air navigation service providers (ANSPs) and subsequently to less flexibility of the air navigation service.

Potential solutions were identified:

- enhancing collaborative decision-making among all partners in the aviation value chain;
- developing tools to solve crises at short notice as they occur (as experienced by several FABs after the MH17 case);
- agreeing on indicators of how to measure volatility; and
- adding more flexibility to the current regulatory system. This could, for example, be achieved by providing operational or financial buffers.

In addition, all partners agreed that some restrictions in quality of service provided are inherent to the system and cannot be influenced.

Dr Bernd Tiemeyer, PRU / EUROCONTROL: *While unit cost of ATM/CNS provision are decreasing, ATFM delay-related cost are increasing with growing traffic, resulting in increasing total unit cost. Capacity provision is falling behind demand in some areas. It appears that the flexibility to react to changes in demand is reducing. The question is: How can we make the system more flexible again?*

Geoffroy Ville, FABEC / DSNA: *To ensure quality of service, and as we are working at the capacity limit in several sectors, we need to find ways to balance the airspace users' normal demand for flexibility with the operational need for predictability of traffic of air navigation services. Collaborative decision making is a possible answer.*

Janusz Janiszewski, BALTIC FAB / PANSO: *Baltic FAB is still heavily impacted by the MH 17 case: Suddenly, traffic dropped by up to 150 overflights a day, followed by unpredicted new flows in the eastern part of Poland. On top of this, the number of military exercises is increasing strongly.*

Veselin Stoyanov, DANUBE / BULATSA: *In 2014, Danube FAB had to cope without warning with a traffic increase of more than 20 percent due to the closure of Ukraine airspace. To solve the situation a wide range of tactical, short- and midterm measures had to be implemented – ranging from changes in rosters, airspace design up to new technical equipment.*

Patricia Ruiz Martino, SW FAB / ENAIRE: *RP2 was a very challenging phase for the SW FAB, with traffic growth well above all expectations as a result of political instability in some classical tourist destinations, which forced traffic to move into the SW Axis area.*

Joe Degiorgio, BLUE MED FAB / MATS: *Three geopolitical crises are affecting Blue Med airspace: The closure of Libyan airspace has led to a massive loss. The sanctions imposed by Kingdom of Saudi Arabia / Bahrain / UAE / Oman on Qatari-registered aircraft led to a huge shift of flights away from the Malta FIR. And traffic circumnavigating the Ukraine has been shifted to the west.*





Alexander Hanslik, FABCE / Austrocontrol: Traffic is volatile and we have to live with volatility. While there are limits to the ATM system's flexibility, it has proved to be fairly flexible, and FABCE ANSPs have, by and large, delivered capacity way beyond what was forecasted. By contrast, the regulatory system is rather rigid. We should aim for a more dynamic management of the regulatory targets to better reflect the volatile nature of our business.

Further discussions are needed. One of the next steps will be a scientific workshop organised by Baltic FAB, FABEC and the German Aviation Research Society in Warsaw.

About FABEC

The airspace of the six FABEC States of Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland is one of the busiest and most complex in the world. The majority of the major European airports, major civil airways and military training areas are located in this area. FABEC airspace covers 1.7 million km² and handles about 5.8 million flights per year – 55% of European air traffic.

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