Volatility: Manage the “known unknown”

24 May 2018

On May 15-16 up to 130 academics and practitioners involved in air traffic management, airline and airport operations from all over Europe attended the Research Workshop “Air Traffic Volatility and its impact on ATM Performance” held in Warsaw. The event was co-organized by Baltic FAB, FABEC, SGH Warsaw School of Economics and German Aviation Research Society (GARS).

The objective of the workshop was to investigate volatility in air traffic and its impact on performance which is becoming a key issue and a growing challenge within the aviation sector. Organisers wanted to bring together academics and professionals to share different perspectives and combine all the contributions in one place at one time focussing not only on causes but also on possible solutions.

Volatility is mainly perceived as un-forecasted instabilities in the entire aviation chain, composed of:

- Airlines with their competitive struggles, operational limitations and mitigation measures,
- Air Traffic Management (ATM) with long-term economic cycles, imposed targets and limited however necessary flexibility buffers,
- Airports and Ground Handlers with their multitude of customer-provider relations in changing decisive environment.

Throughout the discussion, it was pointed out that there is a significant impact of traffic volatility on the performance. The strong interdependencies of all operational stakeholders within the aviation chain function as a catalyst by increasing potential effects on performance.

Along with limiting performance margins and tightening targets, instabilities in air traffic – both in intensity and in traffic flows – are becoming troublesome, outstanding above thinner and thinner margins. Those unexpected costs and airspace capacity instabilities can be managed only through common efforts of the aviation transport chain. Within ATM they are often related to underinvestment mainly in staff – based on wrong traffic forecasts. Several participants proposed that a capacity buffer expressed for example in additional air traffic controllers to reduce the impact on potential missing capacity provision to derive a total economic cost optimum.

Short-term measures are applied across Europe, but in an uncoordinated way, therefore a long-term solutions are necessary that would take into consideration principles, like the actual role of ATC, passenger interests etc. Causal and statistical analysis is in progress in various points of Europe and it started showing the first effects. However, in-depth studies are unavoidable. Volatility phenomenon requires common understanding, undertaking joint efforts, enhancing communication and operational awareness of all the stakeholders, as well as developing an appropriate regulatory landscape.

The most efficient direction to manage volatility in the aviation system seems to be based on standardized, fair exchange of operational information among all stakeholders of the European aviation system that would enable to self-regulate the system within acceptable limits. Forward-looking models of managing the necessary flexibility of the system exist and the proper balance is still to be studied between direct and indirect costs of alternative scenarios, like centralization of capacity and routing management versus maximization of local and regional throughput. The results of the two-day workshop shall be addressed in the revision of the charging and performance regulations and new performance targets that all are in preparation right now. This workshop was one of the very first steps in aviation sector's way to cope with volatility in air traffic.

More information about the event and presentations can be found here: www.balticfab.eu and www.fabec.eu.

For more information please contact:
Baltic FAB, Magdalena Kukuła: +48 603 411 805
FABEC, Roland Beran: +49 6103 707 4190