

Research Workshop

# Climate change and the role of air traffic control

22-23 September 2021 in Vilnius / Lithuania

## Invitation

**REGISTER NOW!**



# Climate change and the role of air traffic control

Mitigating the impact of climate change to meet Europe's ambitious carbon-neutral target by 2050 requires coordinated measures across the aviation industry. The latest Inter-FAB research workshop organised by Baltic FAB and FABEC on 22-23 September 2021 in Vilnius, Lithuania, brings together leading academics, air navigation service providers, policy makers and climate specialists to examine the role played by air traffic control in delivering sustainable aviation services for European citizens. The event is organised in partnership with Vilnius Gedimino Technical University and the German Aviation Research Society (G.A.R.S.).

The workshop aims to deepen understanding of the contributory factors behind aviation emissions and shares in-depth analysis selected from more than 20 expert submissions. Latest research shows the management of non-CO<sub>2</sub> emissions to be just as important as CO<sub>2</sub> emissions in reducing aviation's climate

impact, highlighting the importance of reviewing all aspects of flight. Factors including weather patterns, flight paths and altitude affect the formation of contrails and form part of wider data analysis of mitigation measures. Simply focusing on fossil-fuel emissions fails to recognise opportunities across several areas to reduce the environmental footprint of aviation.

## Challenges

Air navigation service providers face difficult choices in managing air traffic expeditiously between Europe's busy airport network in a sustainable way and balance issues of safety, cost, punctuality and environmental impact. Keeping aircraft in the air longer may reduce overall fuel burn if it means more optimal operations on the ground, with more frequent take-offs and landings at busy hubs. Unexpected events such as severe weather – increasing as a

result of climate change – or industrial action leads to lengthy diversions around impacted airspace and cause increases in aviation's environmental footprint. Analysing exactly how these measures affect emissions are helping to determine future priorities to ease decision-making at a political level.

The workshop keynote address is provided by a leading climate change analyst from a top European university. It sets the context for a series of panels addressing priority areas of research led by industry experts from climate, aviation and policy sectors. Topics include economic estimates and measurement of the climate cost of aviation, efficiency benchmarking, machine learning, new digital technology, and access to accurate weather data to improve operational performance. Delegates will learn about work underway by the World Meteorological Organisation, weather companies and air navigation service providers.

## Objectives

The workshop sets out to identify and review opportunities for more sustainable operations. By developing a better understanding of aviation's contribution to climate change, it is possible to develop appropriate airspace management measures and contribute to improved performance. Finding trade-offs between the different key performance areas, for example balancing the passenger view with the environmental impact, is the first step towards managing these conflicting dynamics.



Discussion topics include the role of real-time weather information in optimising trajectory management, upper airspace trials designed to reduce contrails, and use of the Jetstream to reduce fuel consumption, raising several key questions:

- What is aviation's precise contribution to climate change and what share is attributed to air traffic management?
- How can air traffic management help to reduce the impact of aviation on climate change – in which areas and to what extent?
- How can we find trade-offs between different key performance areas?
- Unpredictable weather severely affects traffic flow, distance flown, flight time and predictability. How can procedures reduce the negative effect of weather? What are the best practices?
- What are the impact and interdependencies of global phenomena (ie Jet-stream) related to local phenomena towards air traffic control?



*“ This workshop examines the impact of air navigation services on climate and how it can be reduced ”*



### **Logistical information and registration**

The workshop takes place over two days from 22-23 September 2021 in Vilnius. Attendance is free of charge.

**To register please go to [FABEC.eu](https://www.fabec.eu)**

For organisational reasons, only on-line registrations will be accepted. In addition, the number of participants is limited. In case of overbooking, the organiser reserves the right to withdraw reservations.

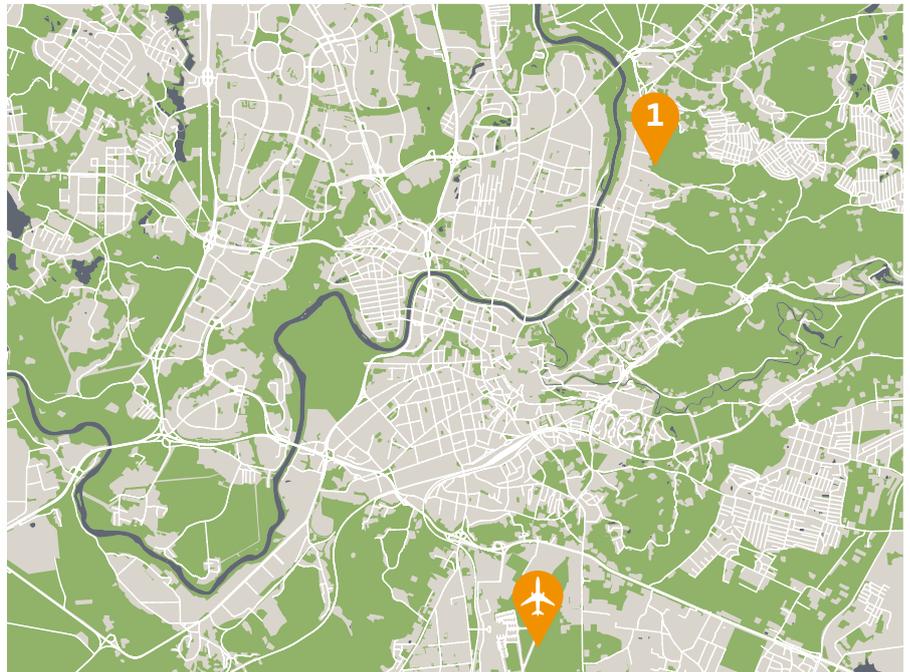


**1 Workshop Venue**

**Vilnius Gediminas Technical University**

Saulėtekio al. 11  
10223 Vilnius  
Lituania

 **Vilnius International Airport**



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**Impressum**

Editor: FABEC ComCell

Design: Publium SA

Status: June 2021

www.FABEC.eu

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