

météo et climat

THEMATIC MEETINGS
19 — 20 November 2026

International conference

En route to sustainable aviation: from climate science to mitigation policies

Abstract

Chris Deseure

Bridging the Gap: Towards Collaborative Systems for Network-Wide Navigational Contrail Avoidance

As a first step toward network-wide navigational contrail avoidance, this presentation introduces a collaborative operational concept to mitigate aviation's non-CO_2 climate impact by avoiding contrail formation through pre-tactical, airspace-wide coordination. Developed under the CONCERTO project (2023–2026), the concept integrates airlines and ANSPs to assess feasibility, scalability, and climate benefits. The goal is to operationalize contrail avoidance while preserving ATC predictability and airspace capacity.

Key elements:

- **Concept of operations:** Designed with BOREALIS ANSPs and tested in shadow mode (Nov. 2025), the concept ensures no capacity reduction (1.8% of flights rerouted) while minimizing fuel penalties (1.07% per rerouted flight, <0.05% at fleet level).
- **Collaborative workflow:** Airlines and ANSPs jointly manage flight plan adjustments to avoid contrail-prone regions, balancing climate benefits and operational constraints.
- **Phased validation plan:** From exploratory research to large-scale deployment, the concept is designed to evolve through medium-scale tests in increasingly complex airspaces.