

Use of Machine Learning for Airspace assessment

Navblue - Airspace services

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NAVBLUE

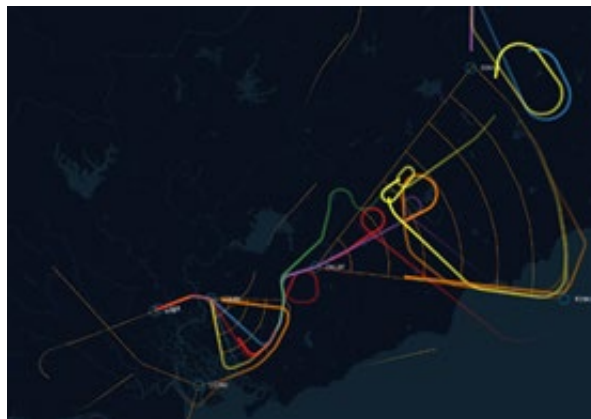
AN AIRBUS COMPANY

Data analytics for Airspace improvement

Before project

Efficiently capture current practices in airspace:

- Real trajectories flown
- Fuel efficiency



Data analytics for Airspace improvement

During and after project

Measure and fine-tune airspace:

- Fuel efficiency - related to airspace functioning metrics



Trajectory clustering from ADS-B data

Deployed
since 2022

What?

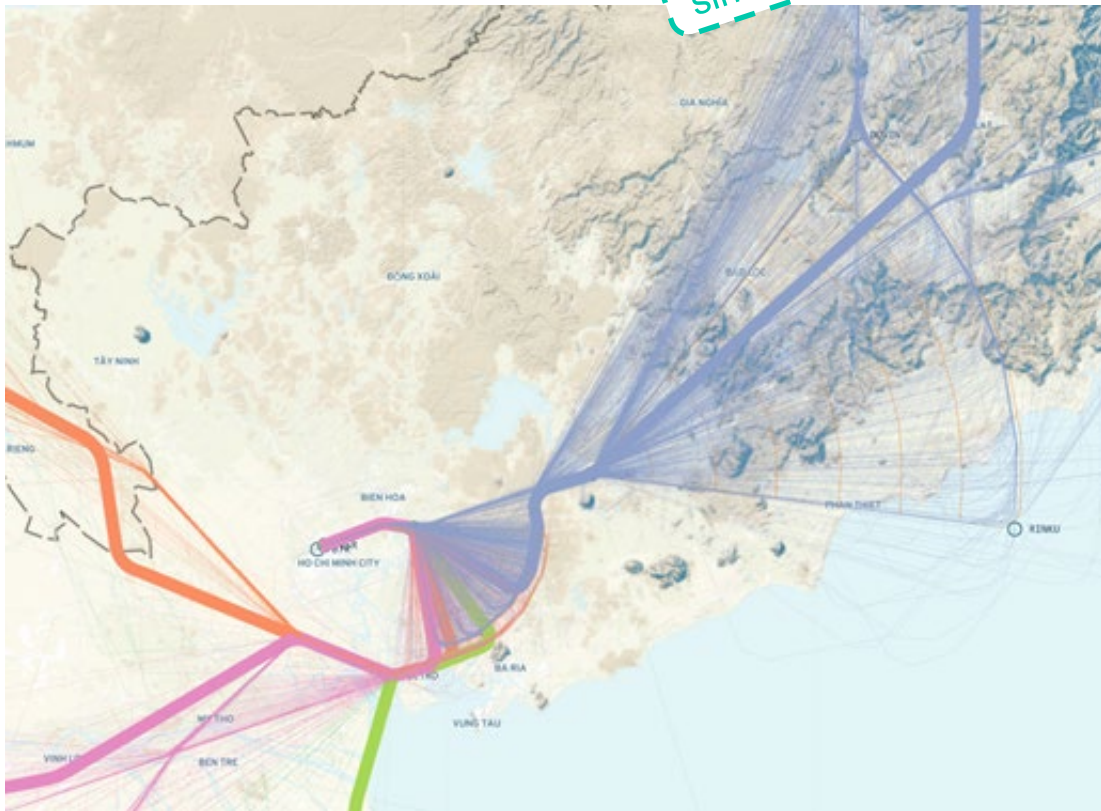
Quick identification of representative trajectories

At project start

Detect representative vector patterns

During project

Focus on representative trajectories



Fuel estimate from ADS-B data

Deployed since 2020

What?

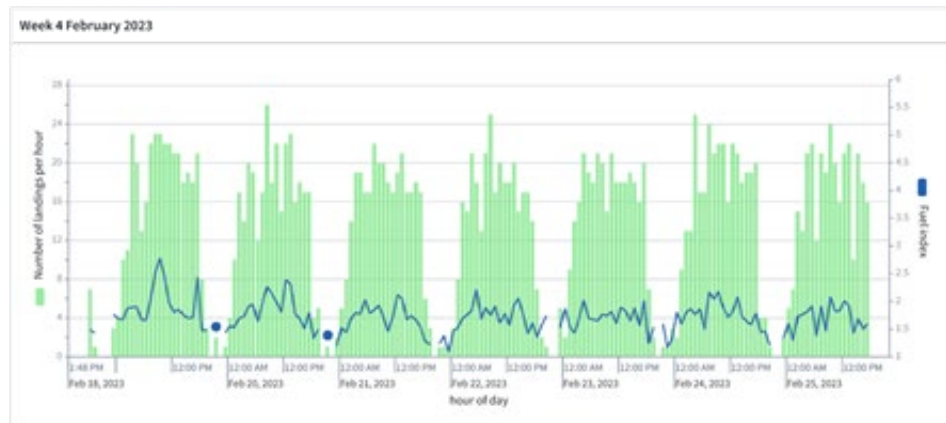
ADS-B data widely available.
Contains **position** and **speed**.

Reconstruct fuel flow

Training on FDR
10 airlines, 2 years of traffic

Platform constraints

Big Data: 10Tb+ of ADS-B records



Benefits brought by AI

Low cost of training

Compared to classical performance models

Compatible with large scale datasets

Allows systematic and fast analysis



Efficiency

Provides reliable and exhaustive supportive data.
Frees time to focus on operators and iterate with them