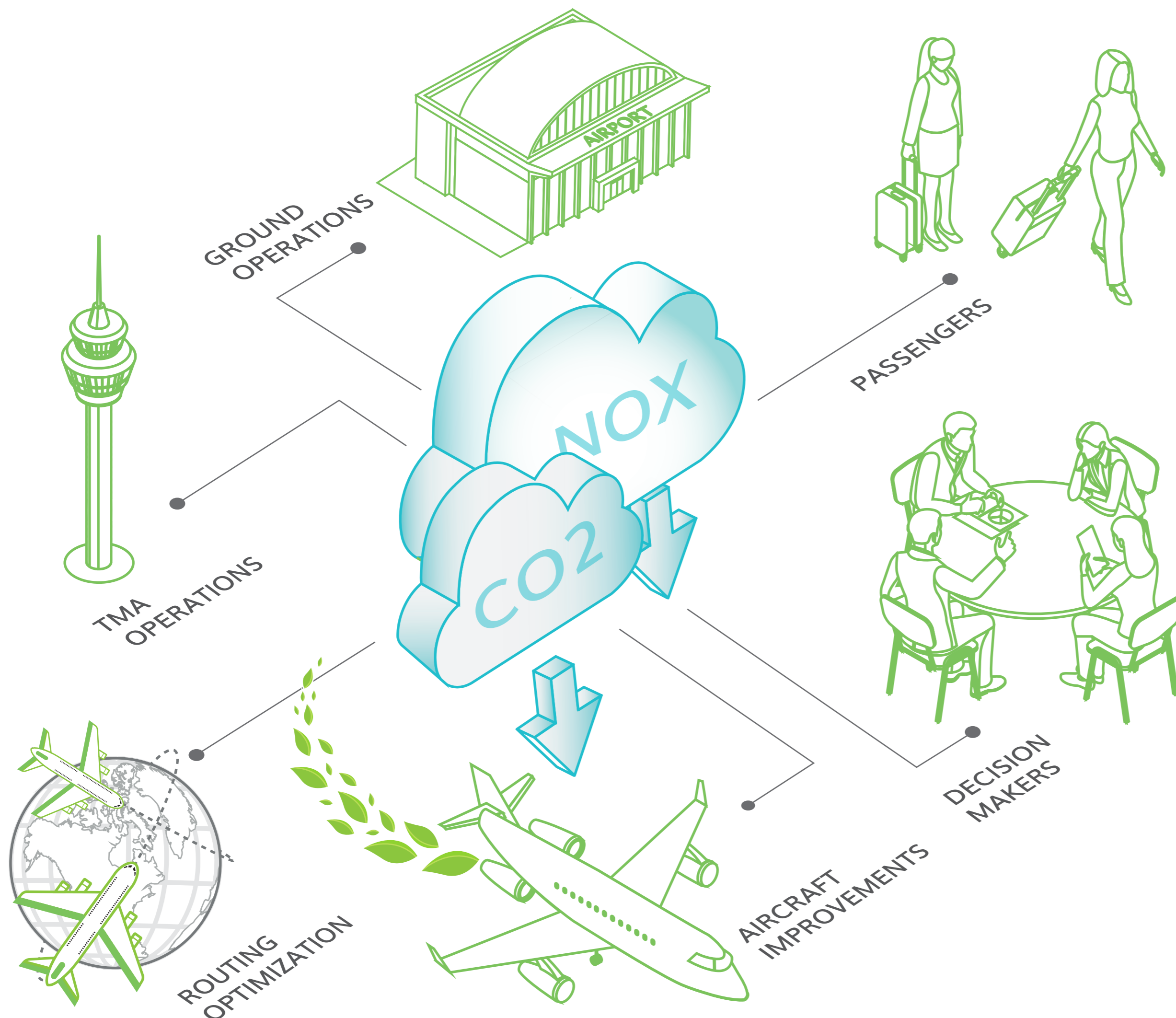


CLIMOP

Authors: Tedeschi A., DeepBlue, NLR, TUD, DLR, Amigo Srl, ITU, IATA, SEA

Climate assessment of innovative mitigation strategies towards operational improvements in aviation



Highlights

01

Selection of **aviation operational improvements** to **reduce the climate impact** of aviation

02

Utilization of **Climate Models** to test operational improvements effectiveness

03

Validation of the **outcomes** through stakeholder's consultation

04

Identification of **mitigation strategies** and policy recommendation to reduce the **aviation emissions at all levels**

Summary

Since the end of the 20th century, the urgency of **climate changes** has attracted worldwide attention. The **aviation sector** is often seen as a major **contributor to climate impact** and environmental issues, even though its contribution to the anthropogenic greenhouse effect (CO₂ and others) is only about 5% (Lee et al., 2010, Atm. Env., 44, 37–4678). The aviation industry, considering the sector growth expected, worked on improvements that could fit at different levels. However, more

incisive operational improvements remained undervalued. ClimOP project aims to contribute to the **reduction of the climate impact of aviation** by identifying a set of harmonized mitigation strategies. These will be developed from a preliminary list of most-promising **operational improvements** (Tab 1) assessed through different modelling tools. After a **validation process** with **all aviation stakeholders**, the mitigation strategies will be proposed as recommendations to policymakers, fostering their implementation.

Operational Improvements

Category	Examples	Main stakeholders	Implementation timeframe
Ground Operations	Electric taxiing	Manufacturers Airports	Short to medium term
	Airport queuing-time minimisation	Airports	Short term
TMA operations	Continuous Climb Departure or optimized Profile Descendent	Airports ANSPs Airlines	Short to medium term
Individual flight planning/routing	Flexible, direct routing	Airlines ANSPs	Short term
	Flying lower, flying slower	Airlines ANSPs	Short term
Airline network operations	Intermediate Stop Operations	Airlines ANSPs	Medium term
	Wind/weather-optimal dynamical flight planning	Airlines ANSPs Aircraft manufacturers	Long term

Table 1. Subset of the operational improvements considered in ClimOp.

Methodology



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