EUROCONTROL

CANSO

AEROPLANE

Advancing mEasures to Reduce aviatiOn imPact on cLimate and enhAnce resilieNce to climate-changE

Carlo Abate – Deep Blue

General Information

- **Title:** **AEROPLANE – A**dvancing m**E**asures to **R**educe aviati**O**n im**P**act on c**L**imate and enh**A**nce resilie**N**ce to climate-chang**E**
- **Duration:** 24 + 6 months – from 01/09/2023 until 28/02/2026
- **Consortium:** 5 partners from 4 countries
  2 Universities, 2 SMEs, 1 International Government Agency
- **Total grant:** € 992 626.25 (EU funding: € 659 000.00)

deepblue consulting & research

University of Reading

EUROCONTROL

UNIVERSITÄT LEIPZIG

Amigo CLIMATE CHANGE

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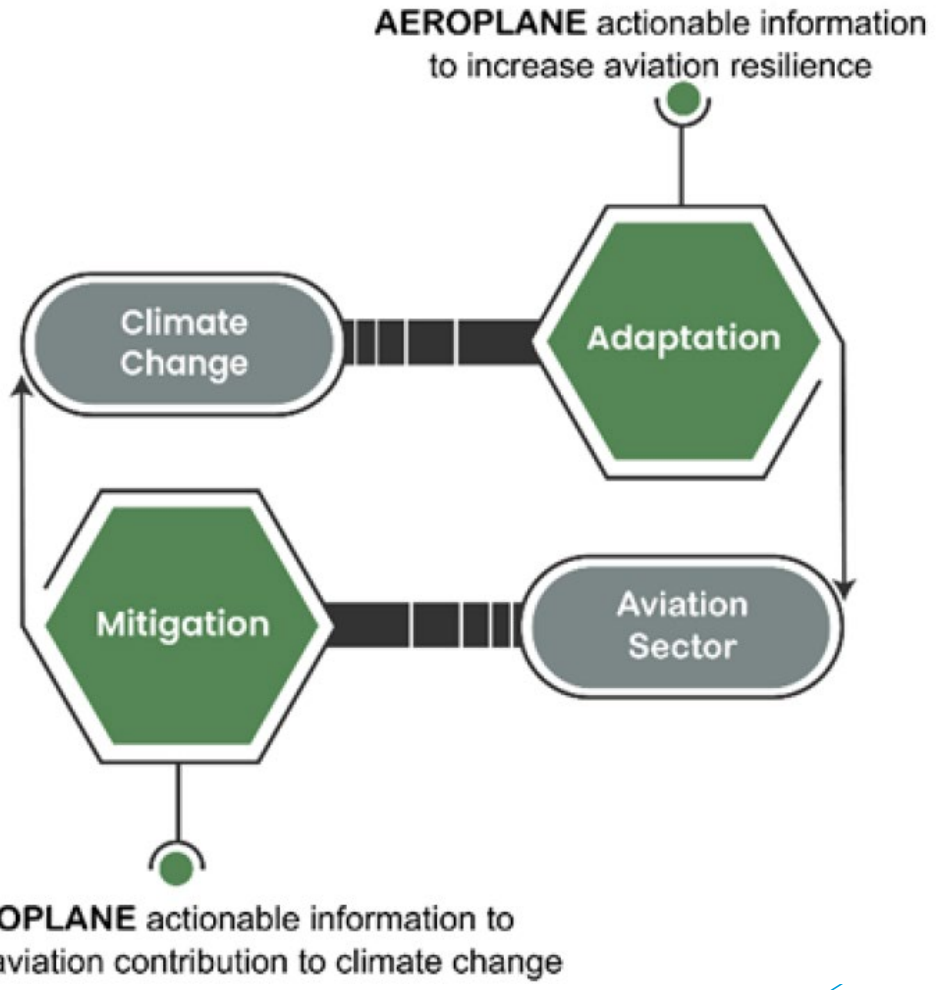
Project Objectives

1. Advancement in the understanding of non-CO2 impacts of aviation focusing on the impact of contrails on cirrus clouds
2. Identification of most relevant climate metrics to assess and predict the aggregated impact of CO2 and non-CO2 emissions on climate change
3. Quantification of the impact of climate change on aviation focusing on the impact of higher temperatures on aircraft performance during take-off
4. Co-development of innovative services for a greener and more climate-resilient aviation



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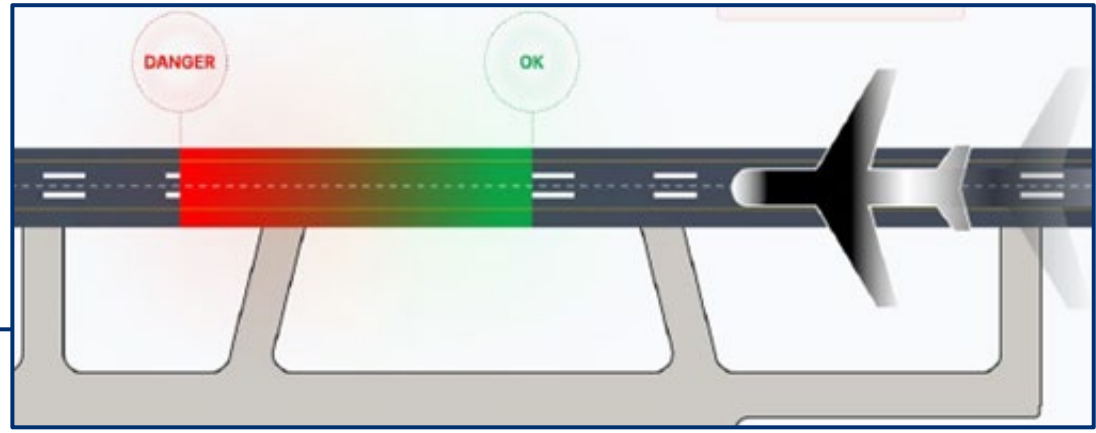
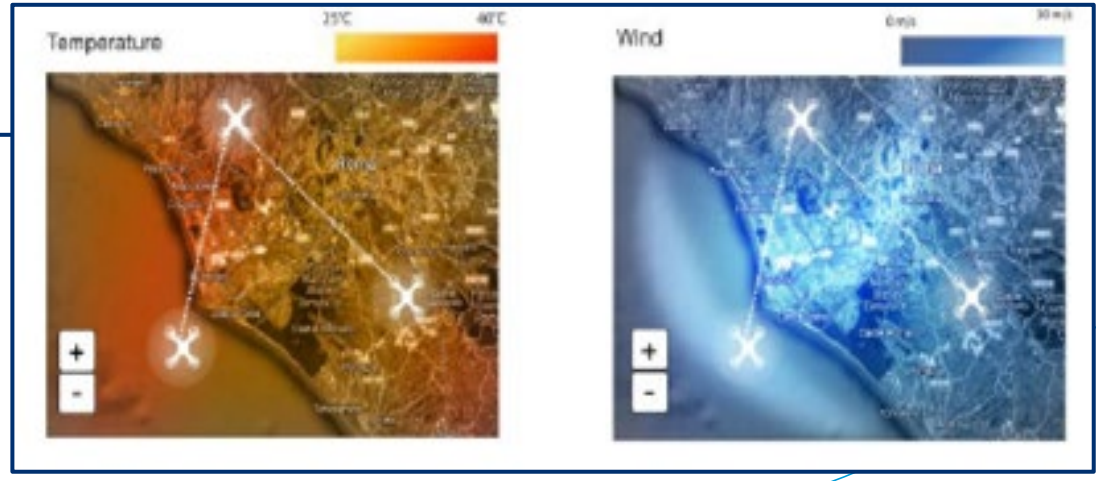
Case studies

1. **Non-CO2 impact of flight operations.** Quantify cooling / warming of transoceanic flights, considering the formation of contrails (also within existing cirrus clouds) and possible mitigation options.

2. **Impact of heatwaves on take-off.**
   Quantify the impact of higher temperatures on take-off performance and noise and prioritise adaptation options.

3. **Urban air mobility – Impact of climate change on new entrants and future RPAS traffic.**
   Study how changes in weather conditions (wind, precipitation, etc) in future climate impact the ability to operate RPAS in an urban environment.





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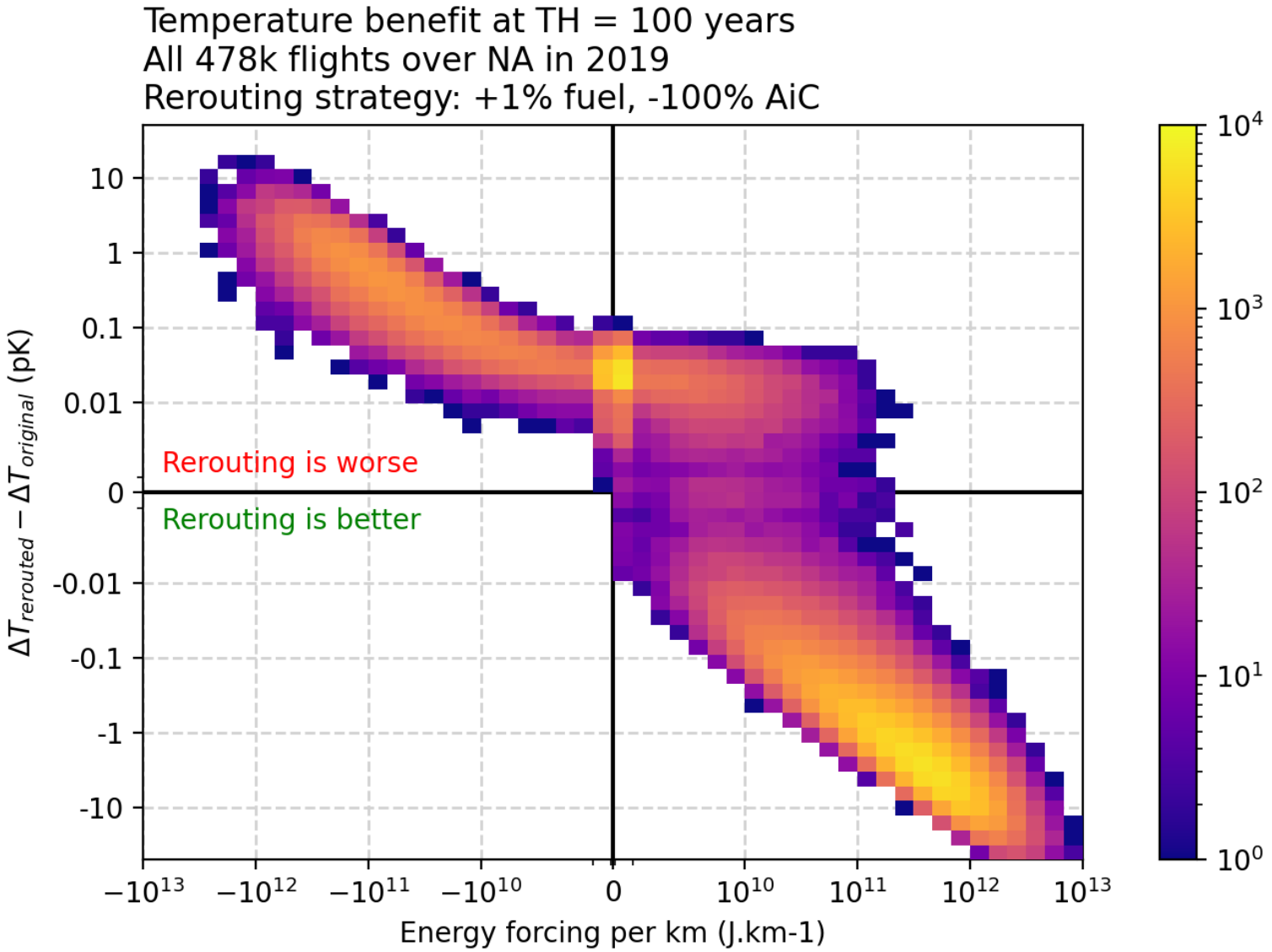
Case study 1 – Non-CO_2 impact of flight operations

Focus on contrails avoidance and embedded contrails and possible mitigation options



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Teoh et al. (2022)

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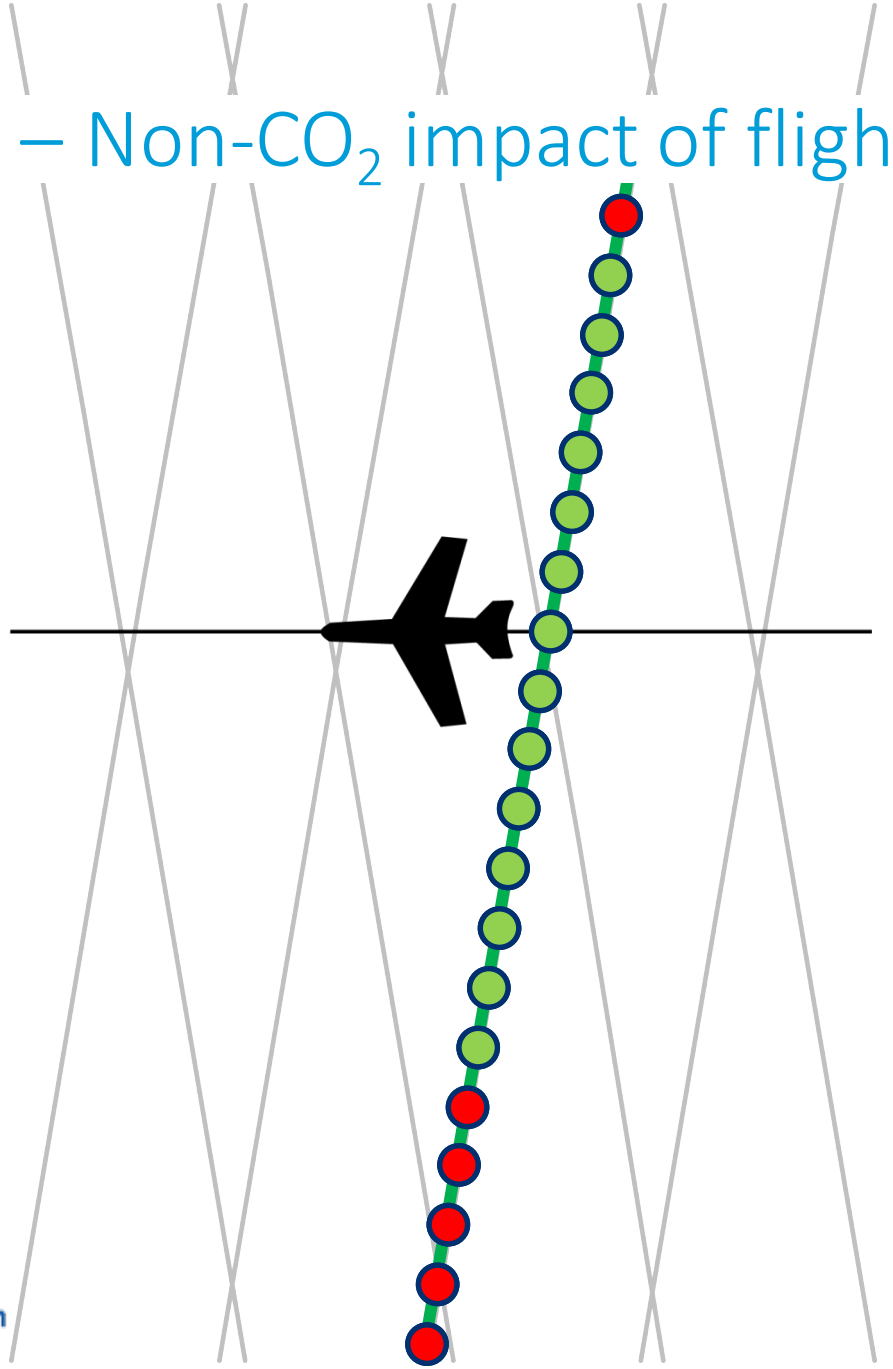

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Case study 1 – Non-CO_2 impact of flight operations

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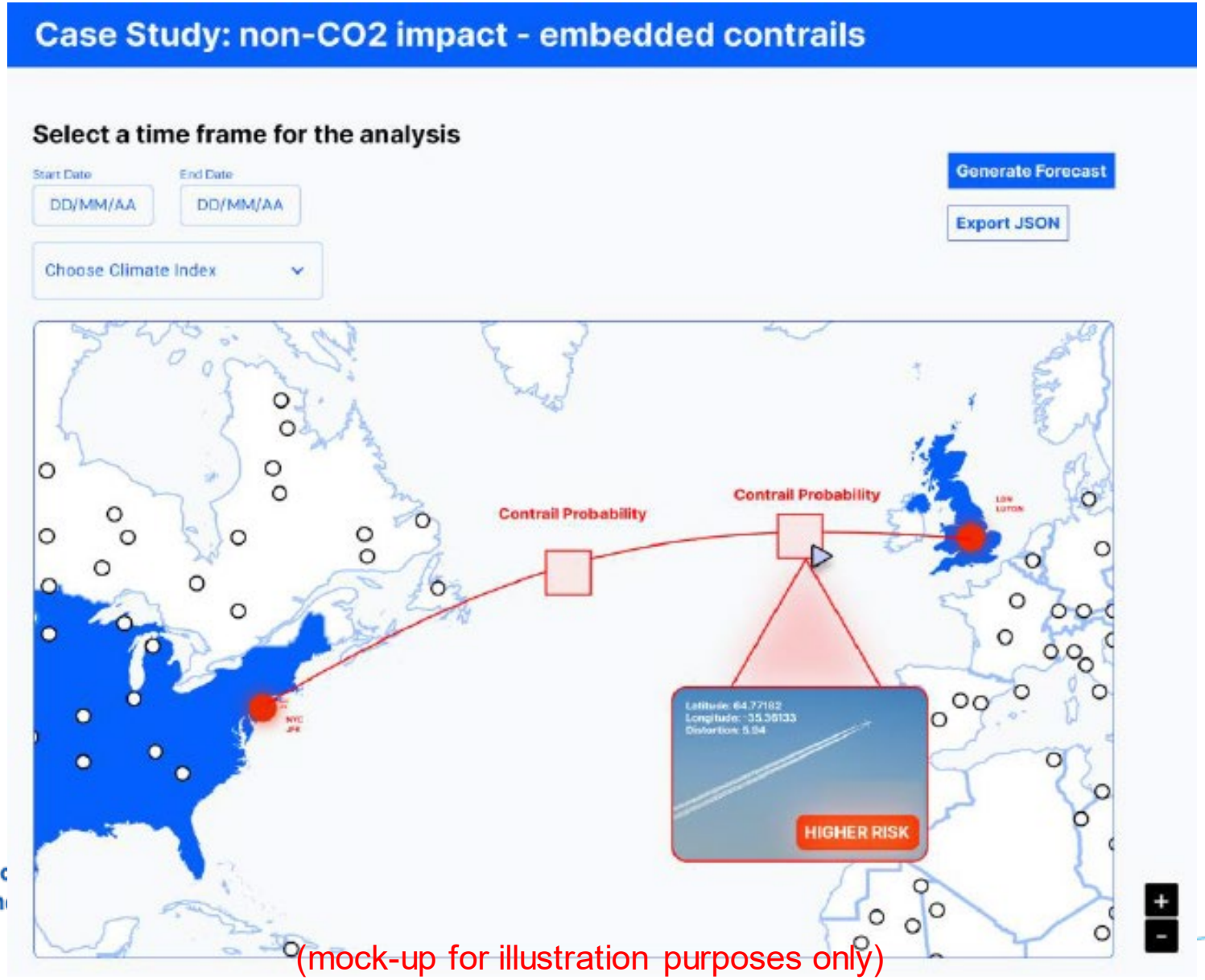

(mock-up for illustration purposes only)

Thank you for your attention

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