PILOT3

Key facts

- Clean Sky 2 programme
- Research and Innovation
- Start - November 2019
- End - January 2022
- Topic Manager - Thales

Main objectives

- Multi-critera supporting decision tool for pilots
- Explicit modelling of performance indicators and uncertainty
- Considering cost and on-time performance
- Network and passenger effects on trajectory optimisation

More information

www.pilot3.eu

Pilot3, a **Clean Sky 2** Innovation Action, developed a **software engine** for supporting crew for civil flights. It provides a set of trajectory alternatives enabling the crew to select the most suitable one considering **multi-criteria business objectives** of the airline and operational **uncertainties**.

Pilot3 considers **on-time performance** (OTP) and total expected **cost** (fuel, passenger disruptions and other costs), when generating alternatives. Sub-objectives are considered as part of the ranking of solutions.

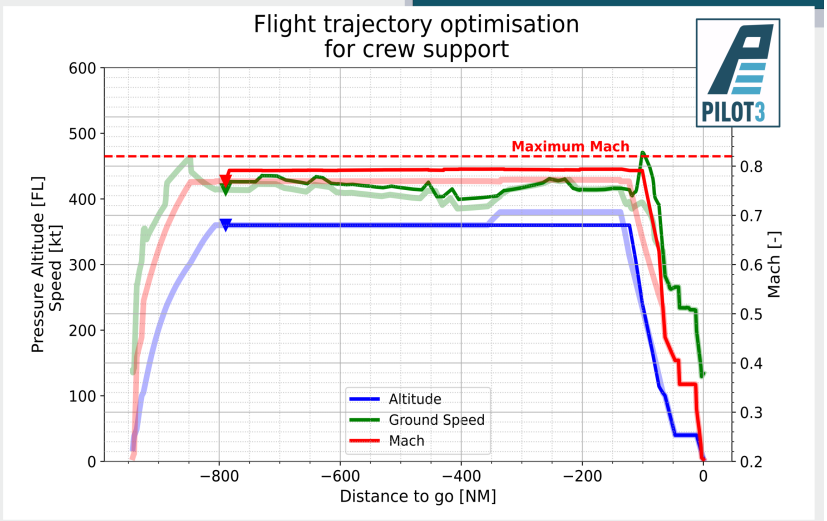
Pilot3 tackles **two of the main problems** faced during the flight:

- **visibility** on the **end objectives** of the airlines, by computing the **total expected costs** as a function of delay at the gate (including intrinsic uncertainties, e.g. passengers missing connections and expected reactionary costs), and

- by incorporating the **modelling of uncertainties due to operational aspects** (e.g. holdings at arrival or taxi-in time).

The individual estimators (performance and uncertainty) can be configured, selecting **heuristic** or **machine learning** based models which can be either updated with data while airborne or rely on pre-departure information.

Pilot3 provides a **modular** solution with easy integration on operational environment and tools.



UNIVERSITY OF WESTMINSTER

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

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THALES

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