PROJECT

OASyS

Overall Air Transport System Vehicle Scenarios

**Funding:** European (Horizon 2020)

**Duration:** Sep 2019 - Nov 2020

**Status:** Ongoing

**Total project cost:** €320,658

**EU contribution:** €302,657

Call for proposal: H2020-CS2-CFP09-2018-02

CORDIS RCN: 225265

**Objectives:**

Overall Air Transport System Vehicle Scenarios (OASyS)

OASyS proposes to develop scenarios for future UAV and supersonic aircraft covering 2035 and 2050. This is accomplished by first surveying existing forecasts and identifying primary assumptions and drivers. This information will then be used to identify and fill data coverage gaps.

The generation of the forecast scenarios is then accomplished by leveraging an existing, in-house model and adapting it to include the required data coverage and new types of vehicles. The leaping-off point is the IDEA algorithm that is a System Dynamics model of the future of aviation that models supply and demand as a sector equilibrium of different types of aircraft classes.

IDEA uses the known aviation data as its baseline and point of departure that can then be influenced by various scenario variables that will deviate from the baseline. IDEA has been used in the past to predict the impact of technology portfolios and their introduction dates to the environmental outcomes of aviation and has undergone model improvement over the last few years.

Specifically, the model has been modified already to forecast supersonic aircraft scenarios. This forecast algorithm is dependent on vehicle specific characteristics as well as population demographics such as location and income. The OASyS team proposes to generate forecasts that can be used to integrate with the Clean Sky 2 Technology Evaluator.

The outcome will be a set of scenarios that will enhance the CS2 Technology Evaluator and can be used to study the impact of UAV and supersonic aircraft across the fleet in global ATS contexts such as environmental impacts. The OASyS team will deliver the scenarios along with detailed reports and project documentation.

**Parent Programmes:**

H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Other programmes:** JTI-CS2-2018-Cfp09-TE2-01-08 - Overall Air Transport System Vehicle Scenarios

**Lead Organisation:**

Centre National De La Recherche Scientifique

**Address:**

3 rue Michel-Ange

75794 PARIS

France
Organisation Website: http://www.cnrs.fr
EU Contribution: €302,657

Technologies:
- Aircraft design and manufacturing
- Supersonic aircraft technology

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing, Other
Transport mode: Air transport
Transport sectors: Passenger transport, Freight transport
Transport policies: Digitalisation
Geo-spatial type: Other