

PROJECT

ADMITTED

Advanced Data Methods for Improved Tiltrotor Test and Design

Funding: European (Horizon 2020)

Duration: Feb 2019 - Nov 2023

Status: Ongoing

Total project cost: €1,718,330

EU contribution: €1,718,330



Call for proposal: H2020-CS2-CFP08-2018-01

[CORDIS RCN : 220993](#)

Objectives:

Flight testing is an important phase during the development of an aircraft to validate the design. During flight, data is gathered, and design problems are identified and solved. The collected data are fundamental for the analysis and Aircraft are properly instrumented to generate large amounts of information. Such a huge amount of data needs to be properly evaluated and traditional methods and platforms are no more effective.

Flight testing is a significant cost contributor to the aircraft production life cycle and is still extensively deployed. Flight test programmes take several years, and more prototypes are built to reduce lead times. Strong adherence to rigour safety and certification requirements and generally unchanged circular advisories inhibits the potential improvement of flight test designs. Innovative algorithms and statistical estimation are not achieving its full potential in the industrialized flight-testing environment.

The methods in this proposal increase the quality and productivity of an experiment, leading to a required test point reduction or increased predictive capabilities. The purpose of this project is to define and implement a state-of-the-art platform able to support data analysis. This is achieved by adopting a complex hardware architecture to support big data analysis and implementing specific algorithms to support data correlation, time series management and statistical analysis.

Furthermore, to support flight test engineers, novel approaches based on machine learning are provided to support the technicians in detecting specific flight conditions. The same platform is also adapted to support the development of the Next Generation Civil Tilt Rotor Technology Demonstrator.

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-CfP08-FRC-01-18 Adoption of a “Digital Transformation” approach to improve NGCTR design and simulation

Lead Organisation:

Txt E-Solutions Spa

Address:

Via Frigia 27
20126 MILANO
Italy

Organisation Website:

<http://www.txt.it>

EU Contribution: €790,000

Partner Organisations:

Stichting Centrum Voor De Ontwikkeling Van Transport En Logistiek In Europa

Address:

Van Nelleweg 1
3044 BC Rotterdam
Netherlands

Organisation Website:

<http://www.cetle.org>

EU Contribution: €445,830

Scuola Universitaria Professionale Della Svizzera Italiana

Address:

STABILE LE GERRE
6928 MANNO
Switzerland

Organisation Website:

<http://www.supsi.ch>

EU Contribution: €482,500

Technologies:

Aircraft operations and safety
Safety (and maintenance) improvement through automated flight data analysis

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport
Digitalisation, Other

Transport policies: specified

Geo-spatial type: Infrastructure Node