

PROJECT

PropMat

Support to Future CROR and UHBR Propulsion System Maturation

Funding: European (Horizon 2020)

Duration: Jan 2016 - Dec 2021

Status: Ongoing

Total project cost: €2,751,019

EU contribution: €2,751,019



Call for proposal: H2020-CS2-CFP01-2014-01

[CORDIS RCN : 199446](#)

Objectives:

In the framework of the Large Passenger Aircraft ITD of Clean Sky 2, the industrial partners Airbus & Safran will push the CROR and UHBR low fuel burn propulsion concepts to TRL6 with a flight test demonstration program on the A340-300 MSN001 aircraft. The activities proposed in this document will make a valuable contribution to this program. The activities comprise: CROR&UHBR numerical aero-acoustic characterisation, CROR blade aero-elastic deformation, innovative acoustic measurement techniques, acoustic chase aircraft flight testing, and blade impact numerical simulation.

In Clean Sky's Smart Fixed Wing Aircraft, NLR supported Airbus & Safran with manufacturing the highly complex wind tunnel test rigs that laid the basis for the technical dossiers available today on CROR. Accurate numerical aero-acoustic simulations techniques were developed at NLR. In close collaboration with Airbus, these were subsequently applied to CROR which led to a deep physical understanding of this innovative propulsion concept. The current proposal builds on the success story of Clean Sky. It ensures a head start on pushing the frontiers of our current knowledge on novel CROR & UHBR propulsion concepts.

In conclusion, NLR holds an impressive track record on engine integration support and is well equipped to carry out the proposed research.

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)

Lead Organisation:

Stichting Centrum Voor De Ontwikkeling Van Transport En Logistiek In Europa

Address:

Van Nelleweg 1
3044 BC Rotterdam
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Organisation Website:

<http://www.cetle.org>

EU Contribution: €2,751,019

Technologies:

Aircraft design and manufacturing
Aircraft design model

Development phase: Demonstration/prototyping/Pilot Production

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other