

HELICOPTERS

CS2 Info Day Toulouse CFP10

10th Call for Proposals (CFP10)
Innovative FTI measurements for aerodynamics and thermal environment

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07.05.2019

Technical objectives:

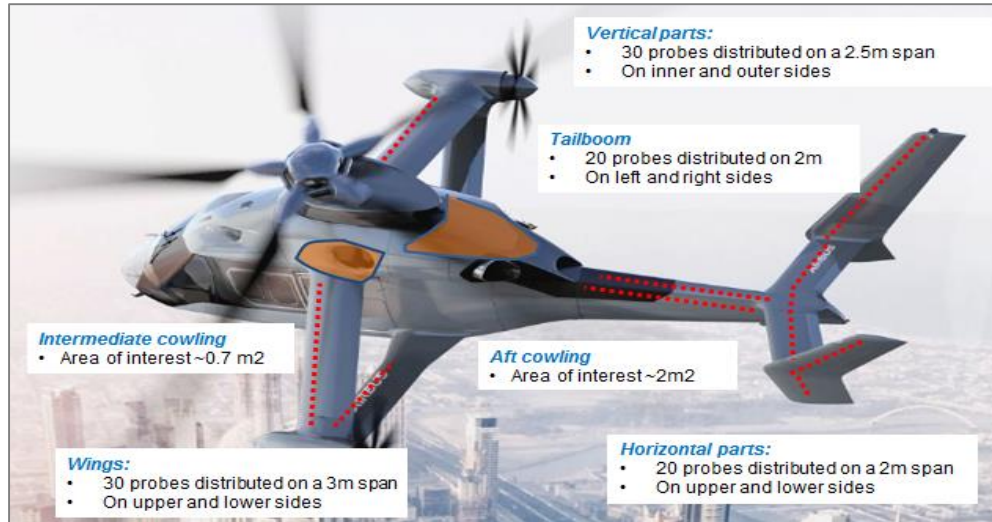
- Deploy innovative “Sensors / Means” on RACER demonstrator, to ...
 - Measure stationary and Un-stationary aerodynamics
 - Measure thermal environment in specific areas
- As of today, the innovative “Sensors / Means” will ...
 - Support the validation of models
 - Provide explanation / prediction of complex phenomena
- To support the wide range of challenges ...
 - Data collection of “Internal / External aerodynamics” in Open / Confined areas
 - Focussing on the “Priority List” provided by the Topic Manager

Requirements: Top level

- The innovative Sensor / Means “**SHALL**” ...
 - Be complementing the present concept and “Ensures” added value
 - Provide innovative technologies
 - Provide high quality data results with appropriate analysis of the “Priority List”
 - Have extremely flexible mounting principles
 - Be from “Proven” design concepts (e.g. → Test proofs)
- The innovative Sensor / Means “**SHALL NOT**” ...
 - Have any impacts on aerodynamic properties
 - Have intrusive solutions of any type (e.g. → Structure modification)
 - Be critical for the present demonstrator development

Sensors distribution and specification: Overview

- Up to 30 sensors per zone (a dozen) to monitor ...
 - Air flow velocity
 - Air pressure / Temperature
- } Provide innovative and professional mapping of external and internal zones (wings, engine intake/exhaust,..)
- Considering* : Aggressive aerodynamics, thermal conditions, environmental conditions and frequency specifications



Overview of external areas of investigations

* Please refer to the Call text

Planning and constraints

Major milestones:

- I. Design & manufacturing phase → April 2020 to June 2021
- II. Delivery / Acceptance → June 2021 (batch 1), December 2021 (batch 2)
- III. Closure (End of support) → April 2023

