

## Partner search or offer

Date (11-04-22)

### (\*) Relevant topic(s) in work programme (Code + topic name)

HORIZON-CL5-2022-D5-01-12: Towards a silent and ultra-low local air pollution aircraft

### Quick description of the project concept (up to 10 lines)

#### objectives

- Reduce nacelle's radiated noise by add damping to its plate-wise structures without adding mass
- Use the technique of Acoustic Black Hole (ABH) to add structural damping with demonstrator
- Bring the ABH approach (currently at TRL2-3) to TRL4-5 by the end of project, with demo
- Production of demonstrator plate-like structure to confirm added damping from ABH and reduce noise between 3dB to 6dB on frequencies superior to 400Hz

### (\*) Description of the expertise proposed (up to 10 lines)

IRT Jules Verne proposes its expertise on implementing ABH as structural vibration damping without adding mass to structures in order to reduce noise emissions. It brings this expertise and especially its capacity to innovate in the manufacturing for creating this solution and bring it to the market in a timely fashion. The ABH is a reality and has been studied by Academics since early 90s, but it is still missing introduction to real products in the market. IRT Jules Verne wants to accelerate this technology introduction by increasing ABH's TRL towards a real use case application in an aero part (like the nacelle walls).

### Keywords describing the expertise proposed (up to 10 words)

- Aero-part acoustic reduction from frequencies over 400Hz
- Structural damping increase without adding mass
- Acoustic black hole

### Organisation information

Organisation name and country:  
IRT JULES VERNE - FRANCE

Type of organisation:

Enterprise  SME  Academic X  Research institute  Public Body  Other:

Former participation to FP European projects?

X Yes  No

Web address:

<https://www.irt-jules-verne.fr/en/>

Description of the organisation:

Founded in 2012, IRT Jules Verne (JVI) is a private R&D center located in Nantes-France and with core activities in advanced manufacturing. The institute has an annual budget of around 25 M€, employs over 120 persons and supports 18 PhD candidates, with more than 100 R&T projects (including 12 EU projects), more than 50 patents and 80 members (50 Indus, 15 academics and 15 SMEs). Currently with more than 17 M€ in equipments and 7000m<sup>2</sup> modern infrastructure (including 4500m<sup>2</sup> of workshops). JVI is market-driven on its manufacturing developments, and it has its activities into TRL3 and TRL7. Its main objective is to increase French and European Industry productivity and competitiveness.

Experience and connections:  
*Members o EU-Robotics, AM-platform and EFFRA*

**(\*) Contact details**

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**(\*) Do you entitle the French Transport NCP to publicly share the above mentioned information including your contact details?**

Yes No

**Would you wish your expression of interest to be shared with other NCPs across EU member states and associated countries?**

Yes No

*If yes, any preferred countries / countries excluded? No preferred countries, all EU*

**(\*) –Mandatory**