



# PERFECTJET PROJECT (AAP NExT «Innovate » )

PERFECTJET is the winner of the NExT "Innovate" call for projects from Nantes University, and is part of the "Industry of the Future" axis, on the pre-maturation component. The project aims to further develop the Smart Element of Cooling technology in a compact system. The current system is the result of two PERFORM theses, the result of a long-standing collaboration between the GEPEA laboratory and the IRT Jules Verne.

PARTNERS



12 MONTH



120 K€

## PERFECTING Smart Element of Cooling (JET) cooling technology in a compact system

### INDUSTRIAL ISSUES

Current control solutions for heating and cooling on dedicated tools present various problems, particularly at high temperatures ( $>100^{\circ}\text{C}$ ). The integration of an innovative cooling device is of proven industrial interest for composite material processing tools that require precision control of cooling cycles, in order to achieve properties that are consistent with good "cooking" of the material.

### INDUSTRIAL APPLICATIONS

- Demonstration on an elementary scale on a static welding assembly process of two thermoplastic composite parts by demonstrating its thermal efficiency with respect to the reference cooling process.
- Objective of integrating the system developed at CERO (SME), for industrial applications in the aeronautical field, with end users such as AIRBUS or SAFRAN.

### INNOVATIVE TYPEFACES

- Make the cooling system more compact in a tooling while maintaining its performance
- Precisely control the thermal dynamics of cooling
- Optimize the shape of the cooling channels.
- Ensuring real-world cooling performance and reliability

