



Industrial players and academic institutions come together to form **SOFIA**, a research program for metal additive manufacturing

Paris, November 23, 2016 - SOFIA ("Solutions pour la Fabrication Industrielle Additive métallique" - *Solutions for Industrial Metal Additive Manufacturing*) is an applied research program for metal additive manufacturing, initiated by the Fives Michelin Additive Solutions joint-venture.

SOFIA's ambition is to contribute to the development of this technology by working on the entire metal additive manufacturing value chain (powders, production equipment, processes). To that end, SOFIA fosters synergies between the skills provided by high-level partners.

An ambitious research program

SOFIA is a 6-year applied research program.

It aims to develop technological bricks which can be used to manufacture robust parts at competitive prices, particularly to meet the requirements of the aviation industry. Work will focus on 4 key areas:

- Perfecting metal powder ranges
- Improving the productivity of additive manufacturing machines by optimizing the material / process pairs and developing new energy sources
- Designing new ranges for parts with optimized technical and economic characteristics, with a view towards digital continuity
- More broadly, increasing the knowledge of the HSE (health – safety – environment) risks linked to metal additive manufacturing in order to create a repository.

Partners with complementary expertise

SOFIA fosters synergies among the skills and experiences of high-level players, which cover the entire value chain from powders to finished parts. SOFIA combines a detailed understanding of the materials and processes involved with end users' needs for the parts made with this technology, notably in the aviation sector.

The program, which was initiated by the Fives Michelin Additive Solutions joint-venture (AddUp brand), is based on the expertise of partners including:

- industrial players: Aubert & Duval, ESI Group, FusiA, Michelin, Safran, Volum-e, Zodiac Aerospace.
- academic institutions: The CNRS and research universities (Centrale Supélec, Centrale Nantes, Ecole Polytechnique, ENS Paris-Saclay (ENS Cachan), University Paris Diderot, University of Paris-Sud, Pierre and Marie Curie University – Paris VI).

A project acting as a catalyst for skills in metal additive manufacturing

SOFIA brings together partners to form a consortium of research and development that contributes to the dynamism of metal additive manufacturing.

With a budget of more than €50 million, SOFIA is funded by the Auvergne – Rhône-Alpes region as well as Bpifrance as a « *Projet de recherche et développement Structurant Pour la Compétitivité (PSPC)* » - *structuring R&D project for competitiveness*, within the “Investing for the Future” program.

SOFIA is certified by the following competitive clusters: ViaMéca, Aerospace Valley, ASTech Paris Region, NAE and Mov'eo.

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SOFIA's ambition is to contribute to the development of this technology by working on the entire metal additive manufacturing value chain (powders, machines, processes). To that end, SOFIA fosters synergies between the skills provided by its high-level partners: industrial players, centered around the Fives Michelin Additive Solutions joint venture (Aubert & Duval, ESI Group, FUSIA, Michelin, Safran, VOLUM-E, Zodiac Aerospace) and academic institutions (the CNRS and the following research universities: Centrale Supélec, Centrale Nantes, Ecole Polytechnique, ENS Paris-Saclay (ENS Cachan), University Paris Diderot, University of Paris-Sud, Pierre and Marie Curie University – Paris VI).

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