



Normandy's Additive Manufacturing community expands

2 07 2024 | NAE Members, NAE, Press release



Rouen, July 2, 2024 - The Normandy region confirms its dynamism in experimenting with additive manufacturing in a variety of sectors - aeronautics, defense, mobility, maritime, energy, health, crafts and cosmetics - under the impetus of FAN[1], a precursor network launched in 2021. Its aim is to promote the adoption of this innovative process through training, R&D and experimentation. Some one hundred organizations have already been made aware of the process, and the experimental platform has a dozen projects completed or underway.

Used for over 20 years in prototyping, additive manufacturing is struggling to get off the ground in industry in general. While this disruptive technology has already proved its worth in functionalizing materials, accelerating development times and boosting design and production agility, more needs to be done to raise awareness of its capabilities and its benefits for products and processes.



This process therefore requires experimentation before switching from traditional machining to 3D printing: the work focuses in particular on the qualification of materials, the mechanical properties of the parts obtained, their robustness and surface finish.

A platform for experimentation

Last October, the FAN network launched its FAN Polymers platform[2]: a tool for innovation and competitiveness at the service of Normandy's players - teachers, students, researchers, start-ups and industrialists - to develop the appropriation of this innovative manufacturing process. This "Normandy Polymer Additive Manufacturing Platform" project is co-financed by the Normandy Region and the European Union through the ERDF (European Regional Development Fund).

Since its launch, the platform's activities have been progressing well: the FAN network has stepped up its efforts to raise awareness of the different uses for different types of process (including those based on powder, filament or resin). **A hundred or so structures (SMEs, major contractors and laboratories) have been made aware of this**, notably through Tech Hour events (one hour to present an innovative technology) and a symposium last February bringing together the entire community on the Plateau de l'Espace (Vernon).

More and more manufacturers are becoming convinced of the added value of this manufacturing process, which in particular enables parts to be made lighter in weight - a definite advantage in several sectors, including aeronautics. INSA Rouen Normandie has been instrumental in strengthening the links between the platform's players, particularly academic and industrial players, by recruiting Lucas DAVID to support the FAN Polymers platform over a three-year period.

No fewer than 7 experiments are underway and 5 have been completed. Themes include functionalization of polymer filaments (electromagnetic shielding), prototyping using powder-based technologies, and industrial feasibility studies. Results will be communicated in due course by the companies concerned.

Preparing the skills of tomorrow

The future of this process also depends on training. More than 150 young people were introduced to additive manufacturing during visits to industrial sites (ARKEMA's CERDATO center in Serquigny), engineering classes with INSA Rouen Normandie and ITII Normandie (Vernon), and additive manufacturing workshops at Le Havre airport.

In addition, the FAN team, through Loïc ROUSSEAU and Samuel CUTULLIC, is also working with students (BTS). Students from 3 schools were able to take part in a training course to design a drone chassis using additive manufacturing, based on an electronic kit supplied. Accompanied by the 3D&G company, they worked on a range of topics, including Additive Manufacturing design rules, drawing up specifications, reviewing first impressions, etc.

[1] NAE, in partnership with CCI Normandie, Cosmetic Valley, NextMove, Normandie Energies, Normandie Maritime, Pôle ATEN - CMA Normandie and Pôle Pharma, structures the Additive Manufacturing in Normandy (FAN) sector.

[2] It brings together several local partners: Arkema, CESI, 3 D&G, **Demgy**, Francofil, INSA Rouen Normandie (GPM), MSC Scanning, NAE, NES 3D and Polyvia Formation.

