FISSEL

CRM Group will lead a new research project funded by the Win4Collective program of the Service Public de Wallonie (SPW Recherche). This new project aims to develop selective surface finishing treatments of metallic parts made by additive manufacturing.

FiSSel aims to facilitate and make more efficient the stages of surface finishing of parts from additive manufacturing with particular attention to:
- the development of self-limiting elimination procedures for support structures
- the localized surface finish on selected areas
- the surface finish of multi-materials

In order to achieve this objective, we will study methodologies to locally inhibit / accelerate the action of surface finishing techniques by chemical polishing (CP) and electrochemical polishing (EP). The study of these methodologies will be based on a combination of numerical models and laboratory tests.

The project will be followed by an industrial comity composed of 6 SMEs and 2 big enterprises. The results of the FiSSel project can be used on the front line by the companies directly involved in metal additive manufacturing (2 SMEs in Wallonia) as well as their subcontractors in charge of operations surface finishing (also 2 SMEs currently active in this field). The activity generated at the level of these former will have positive repercussions at the level of their suppliers and their customers. The marketing of predictive software for finishing operations or the provision of digital services on the basis of the tools developed will constitute another outlet for the results of the project. Finally, we can expect an positive impact also on a number of companies that do not yet use additive manufacturing in their manufacturing process but who could adopt it if a low cost of the finishing operations of the parts makes competitive.

Complementary Partnership

The consortium is composed of CRM Group and CENAERO.

• **CRM Group** will coordinate FISSEL and will treat the experimental part of the project both on mono and multi-material parts.

• **CENAERO** will develop predictive numerical tools for the metal removal during the finishing treatments.