

FORCE - Formulations and Computational Engineering

A new H2020 project to advance materials modelling and business decision systems

Formulations and computational engineering (FORCE) is a new project, underway within the EU program Horizon 2020. The main goal of the consortium is to bring materials modelling to the heart of business decision making by integrating materials modelling into state of the art business decision support systems (BDSS). The project will enable industries to make more knowledgeable decisions based not only on existing legacy data, but also on new data generated by state of the art multiscale and multi-physics materials modelling.

Open integrated business decision framework

The project objective is to develop an open integrated framework that connects materials models at various levels of complexity, experimental data sets and commercial information (e.g. ingredients and processing costs), so that decision makers can rely on a wider variety of key performance indicators. These are combined with multi-criteria optimisation algorithms to identify the optimal trade off when making a business decision, considering appropriate formulation and business constraints.

Strong Industry Focus

The project has a generic focus but targets three specific important industrial sectors as main demonstrators, namely personal care, insulating foams and industrial inks; the tools will be available to use for large, medium and small enterprises alike in the shape of user-friendly Apps, designed around the needs of the end-users (e.g. the industrial formulators).

Bring Materials Modelling to the heart of industry

FORCE brings materials modelling into the centre-stage of business by combining it with advanced machine learning approaches for handling "big data", empowering decision makers through the provision of rapid avenues to optimise existing and design new products to enhance the position of European industries in their global markets.

Contribute to the digitalisation of Europe industries

The FORCE consortium partners subscribe to the activities of the European Materials Modelling Council (EMMC) which promotes the establishment of materials modelling ontologies and standards/metadata as avenues for interoperability between models, optimisation platforms, and business decision frameworks.



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Project Info Box	
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