FF4EuroHPC
SME Innovation Through HPC

www.ff4eurohpc.eu

Project runtime:
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Funding:
EU-H2020, EuroHPC JU

Budget:
9.998.475,00 EUR

FF4EuroHPC helps facilitate access to High-Performance Computing-related technologies for European Small & Medium Enterprises (SMEs) and thus increases the innovation potential of European industry. Whether the SME is running high-resolution simulations, doing large-scale data analyses, or incorporating AI applications into its business or service workflows, FF4EuroHPC assists SMEs to connect their business with cutting-edge technologies.

FF4EUROHPC experiments

Open Call Tranche 1
16 experiments
53 organisations
9 countries

Open Call Tranche 2
26 experiments
79 organisations
22 countries

Sectors
Manufacturing
Energy
Environment
E-Commerce
Healthcare
Farming
Transportation
Aeronautics

Success Stories: Inspiration for Industry

42 experiments met the Open Call requirements, successfully passed the evaluation process, and were selected for funding. During the 15-month duration of an experiment, the experiment partners jointly worked on the relevant use case and strove to overcome the challenges with the help of HPC, AI, ML and HPDA. In the first Open Call, 16 experiments were run involving 53 partners from 9 European countries. All 16 experiments from the first Open Call were successfully concluded and have led to success stories which highlight the expected business benefits for the participating SMEs.

AI-Aided Wind Flow and Gas Dispersion Simulations in Cities

Sector: Environment, Urban Planning
Technology used: CFD Simulations

The participating SME has created a higher accuracy tool and computationally efficient low-cost AI solution to model air quality in cities. The SME is now able to combine sensor measurements with AI simulations and provide the stakeholders with precise information about the local emissions and pollutant concentrations for urban environmental management.

Leveraging HPC for AI and Deep Learning Powered Solutions for Asset Management

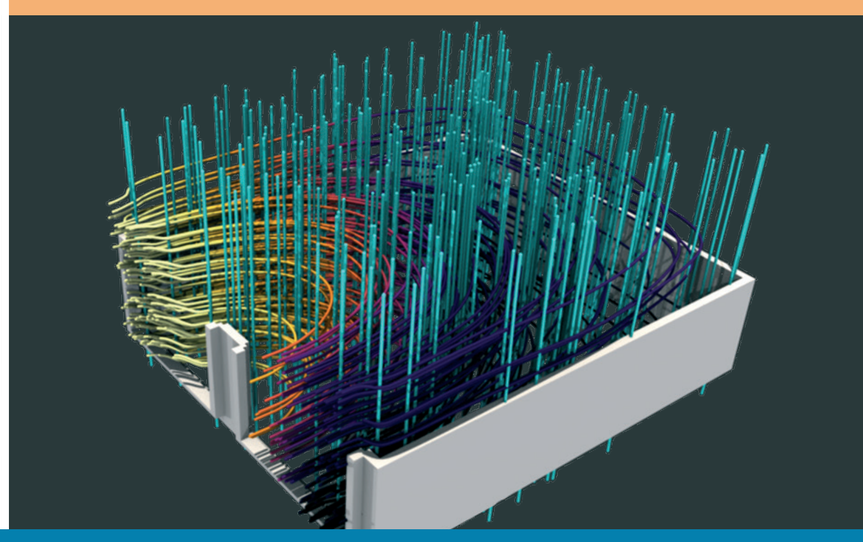
Sector: E-Commerce, FinTech
Technology used: HPC, AI, ML, DL

With the help of automated AI/DL-based models and HPC, the high-tech SME can provide its customers the possibility to optimise financial portfolios with increased complexity risk assessments. These tools in turn contribute to the entire system's stability and reduce investors' risks, especially in the most challenging market situations and scenarios.

Topology Optimization of Micro-Channel Heat Exchangers

Sector: Manufacturing
Technology used: HPC, CFD Simulations

The SME can in this case now produce Micro Channel Heat Exchangers which can meet the complex, competing design constraints due to the newly developed TOLOMHE platform combined with additive manufacturing. This innovative HPC-based SaaS solution is based on coupling a standard CFD solver, an ML model and a parametrized topology.



Leader:
HLRS

Partners:
ARCTUR CINECA CESGA scapos Teratec

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