HiDALGO2

CENTRE OF EXCELLENCE

HPC & BIG DATA TECHNOLOGIES FOR GLOBAL CHALLENGES

HiDALGO2 Project

URBAN AIR PROJECT

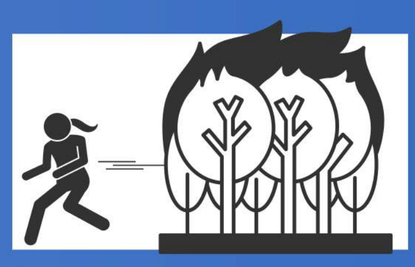
Evolution of the air in the urban areas considering pollution, wind, comfort and planning

URBAN BUILDINGS

Advanced building models for better integration with architecture. Providing a source term for heat and air pollutants (CO_2 and NO_x) to the urban air pollution model.

RENEWABLE ENERGY SOURCES

Energy production from renewable sources like wind and solar panels. Solution accustomed to urban and rural areas.



WILDFIRES

Simulation of wildfire atmosphere interactions and smoke dispersion in forest and urban areas.

METEO-HYDROLOGICAL FORECASTING

High-spatial and temporal resolution meteo-hydrological forecasting chains combining heterogeneous observational data sources.

Project Mission

- Bring together advanced solutions (HPC, HPDA, AI) to provide stakeholders and decision makers tools that would mitigate tragic consequences of climate and civilization phenomenon by delivering necessary knowledge.
- The proposed solutions must be effective enough to cover with satisfactory accuracy research-relevant measurement area. The information must be provided as quickly as possible taking into account changing conditions like the current weather and the traffic situation.

Project Vision

- Extend the possibilities of the world's leading scientific applications in the field of environmental protection to effectively analyse phenomena on a large scale and with high precision that threaten human life and health.
- This will be done through an association of environmental scientists, HPC experts, data and AI analysts and user communities that use synergy to develop solutions effectively solving scientific and social challenges. Gather knowledge and joint effort contribute to federation capabilities and integrating communities around exascale computing in Europe.

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