

Services in numerical simulation of fluids dynamics for architecture and construction



Specialist in 3D modelling of fluid dynamics (Computational Fluid Dynamics), we offer our customers, **architects or engineering firms**, to integrate the CFD simulation of buildings and environment into their projects: **sunlight, winds, built environment and geographical situation** are all taken into account in the early design phase of the project.



From the very first steps of establishing the building envelope to the choice of the best heating and natural ventilation strategy, we help you improve the energy efficiency of the building through criteria such as:

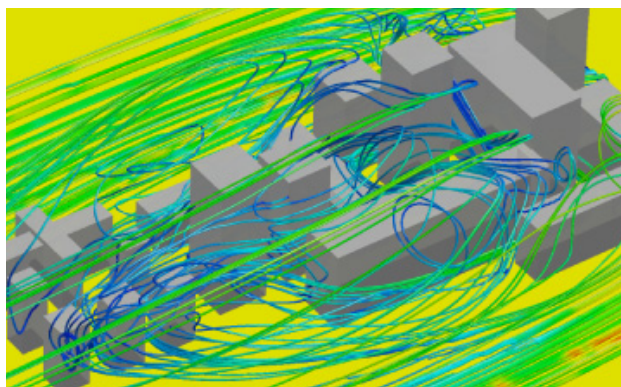
- Energy consumption,
- Air quality,
- Security
- Global comfort.

TOWARDS SUSTAINABLE DEVELOPMENT

Exposure, heating, HVAC or natural ventilation...

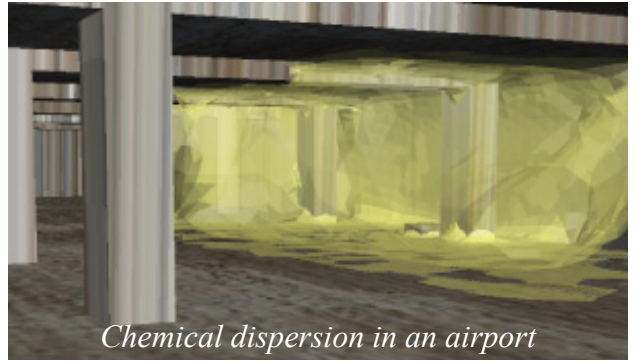
In the scope of energy efficiency in buildings, all the energetic aspects are important, without compromise on **comfort, safety & security or air quality**. Through the simulation of different configurations of your projects, we can help you conciliate these aspects.

You may thereby evaluate beforehand the efficiency of an existing solution and even exploit the potential of a new idea!

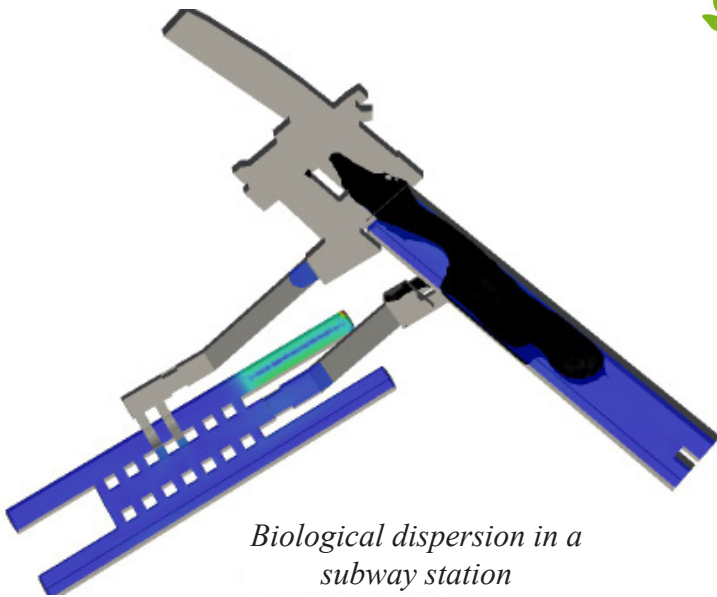


RISK AND SECURITY MANAGEMENT

Modelling of pollutants (**Radiological, Biological or Chemical** substances, particles) allows to visualize their dispersion in space and estimate compounds concentrations in each place of the infrastructure. Optimization of warning devices and countermeasures through these simulations can improve the security of people in **critical infrastructures** (railway and subway stations, airports, etc.) as well as in **industrial sites**.



Chemical dispersion in an airport



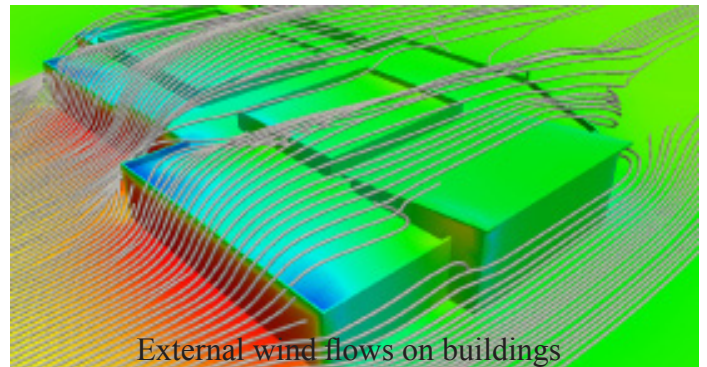
Biological dispersion in a subway station

OUR OFFER

Our actions for our customers include:

- Indoor and Outdoor CFD studies
- Consultancy and technical assistance
- Integration of computational tools in an existing design process
- Customization and implementation of CFD software

We remain at your service to evaluate your needs and create a proposal for a tailored technical solution.



External wind flows on buildings

REFERENCES

FLUIDIAN provides major actors of various sectors (**industry, construction and defence**) with its engineers expertise and R&D know-how



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