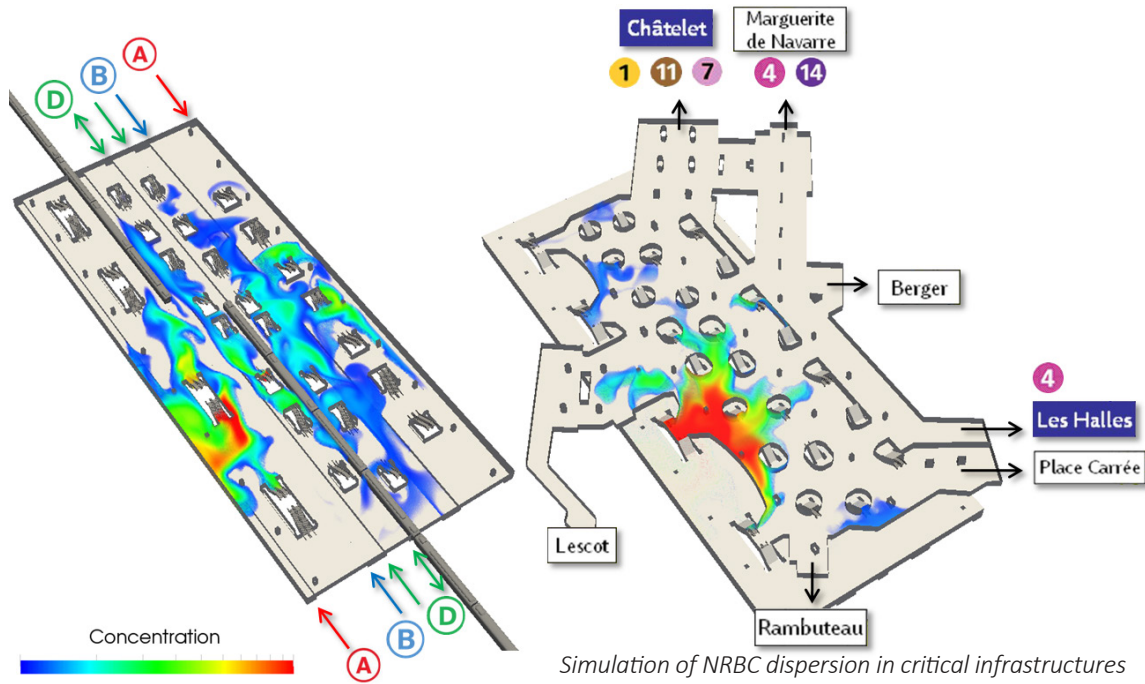## MANAGEMENT OF NRBC RISK

CFD modeling of dispersion of all kinds of chemical or bacteriological pollutants (gas, particles, dust, pollen, virus) allows analyzing their spatial distribution in **critical infrastructures** and optimizing **alerts and countermeasure devices**.
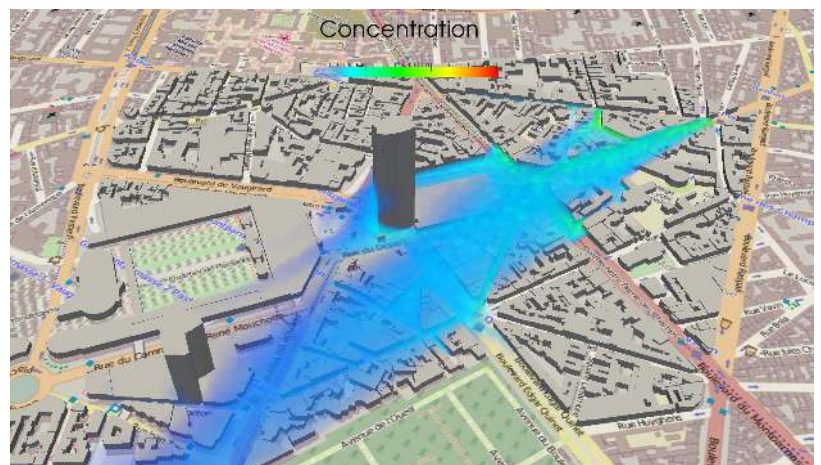

Simulation of NRBC dispersion in critical infrastructures (ex. RER/subway station in Chatelet-les-Halles, Paris, FR)

CFD modeling, after having contributed to the growth of industry since the early 1990s, is used today to improve the **resilience** of **urban areas, industrial sites** and **critical infrastructures** such as train stations, airports, subway stations, etc.

OUR OFFER

- **CFD simulation of indoor & outdoor dispersion scenarios**
- **Chemical or Biological dispersion (NRBC)**
- **Use of realistic weather data**
- **3D urban modelling based on GIS data**
- **Software engineering : automatic workflows, GUI, etc.**

Simulation of NRBC dispersion in urban area (ex. district of Montparnasse, Paris, FR)

FEATURES

The tools we use are developed under QA and have been extensively validated. They are able to simulate accurately indoor or outdoor environments . Models we have developed add them the following features :

- dispersion of light or heavy gas
- dispersion of light or heavy aerosols
- deposit and resuspension of aerosols on walls
- effects of moving trains on flows and pollutant clouds
- sensors of various kinds (points sensors, laser barriers, 3D cameras)
- alerts and countermeasures systems (C2)
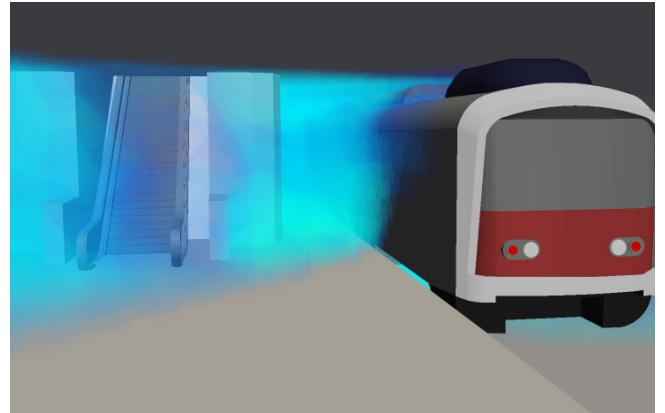
OPEN-SOURCE

We are specialized in customizing and engineering global solutions based on open-source sofware and librairies for scientific computation

OUR REFERENCES

Leading players of **Construction, Industry** or **Defence & Safety,** they're trusting us to boost their innovation!

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