# HPC-Cloud-based simulation of drifting snow

The Challenge

The challenge was to study the commercial feasibility of a Computational Fluid Dynamics (CFD) consultation service to civil engineering firms for **assessing snow loads on buildings** employing CFD program snowFoam on the Fortissimo HPC-cloud infrastructure. For the viability of such service, it is essential that both the **simulation time and the cost of the computation are acceptable** within the framework of a typical CFD consultation project.
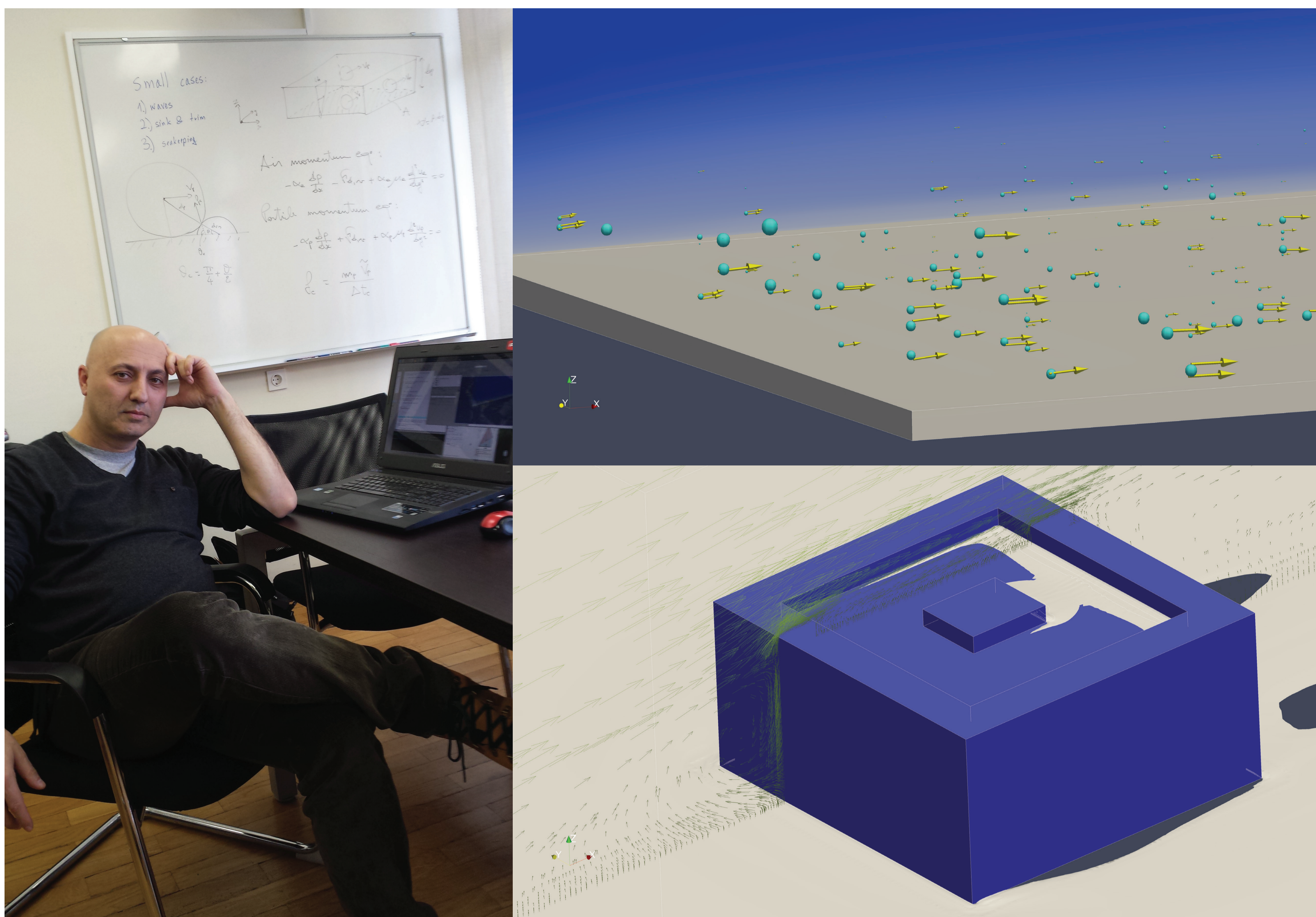
Organisations Involved

End-user and Code Developer:

BinkZ Inc.

HPC Expert:

VORtech bv
THE SCIENTIFIC SOFTWARE ENGINEERS

HPC Provider:

SURF SARA

The Solution

- In the solution developed in this case study, the user has access to **computing resources, storage and visualization facilities** from a desktop environment via a secured webpage in a browser.
- The required computational resources needed and their costs are appropriate considering those for the overall design of a building.

The Benefits

- The simulation of drifting snow requires **significant compute resources**, which can only be provided by a large HPC system.
- If Binkz were to buy a suitable system, its overall costs would be much greater than the use of a Cloud-based system.

PRIDE EXHIBITION
/GRAND HOTEL ADRIATIC, OPATIJA, CROATIA/
31/MAY - 3/JUN/2016