



**CHAM**

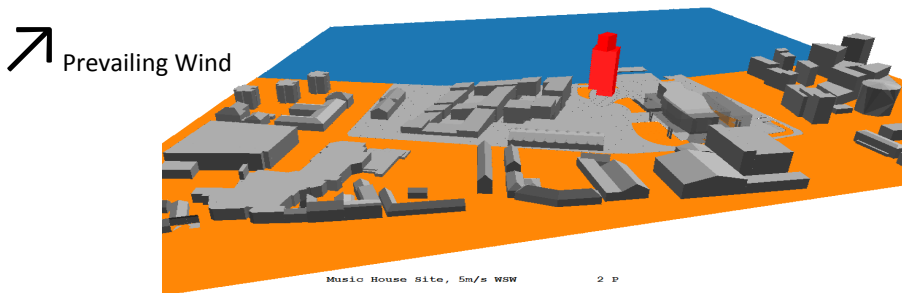
*Pioneering CFD Software for Education & Industry*

# Music House Site Wind Flows

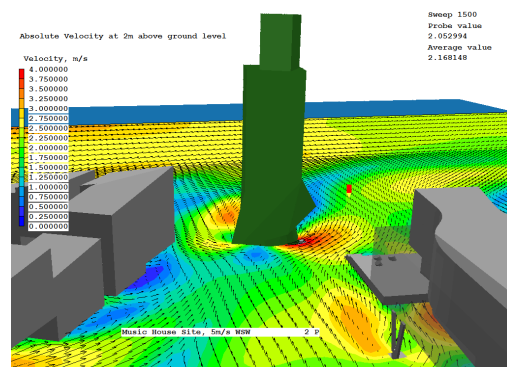
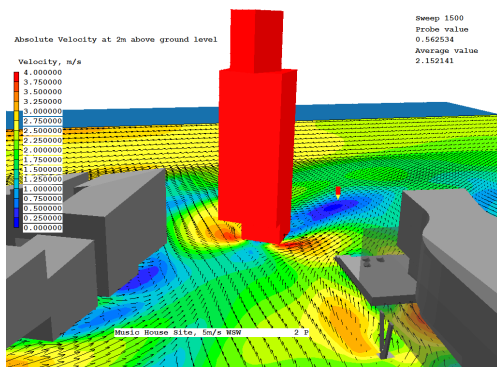
## PHOENICS Case Study – Environmental

Vienna-based consultants, Coop-Himmelb(l)au, requested a demonstration case from CHAM to gain a better understanding of the capabilities of PHOENICS when applied to their building geometries. These were supplied in 3DS (3D Studio) format and readily imported into PHOENICS/FLAIR.

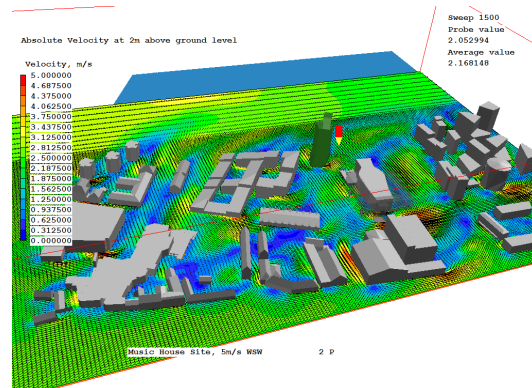
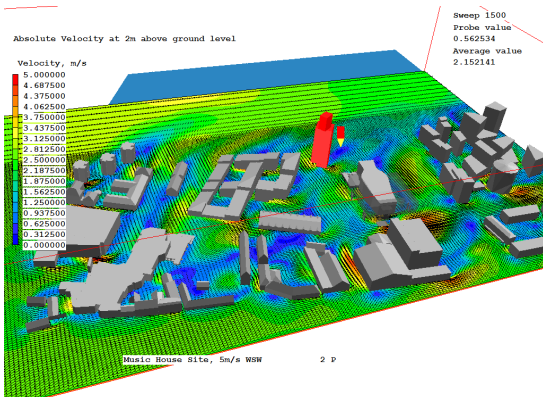
Using the PHOENICS Online Internet service, the client was shown wind flows around a group of buildings, to demonstrate how different building-designs might influence, or be influenced by, the urban fabric surrounding them. They were particularly interested in the evaluation of different high-rise shell geometries and the resulting wind performance of their buildings. With urban-wind-flow applications, a primary concern is pedestrian comfort meaning that it is important to identify potential regions of high turbulence, and recirculation.



In the “Music House” case prevailing winds are from the West-South-West direction with a speed of 5 m/s at a height of 10m. Two alternate high-rise building designs were considered, shown separately in red and green.



During the online presentation, Coop-Himmelb(l)au personnel were impressed with the variety of graphical output options of the VR-Viewer. They also liked the quick set-up time for the study and the possibility to test different geometries over night. The runs, for 1.65 million cells, took 10 hours on a dual-core PC.



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