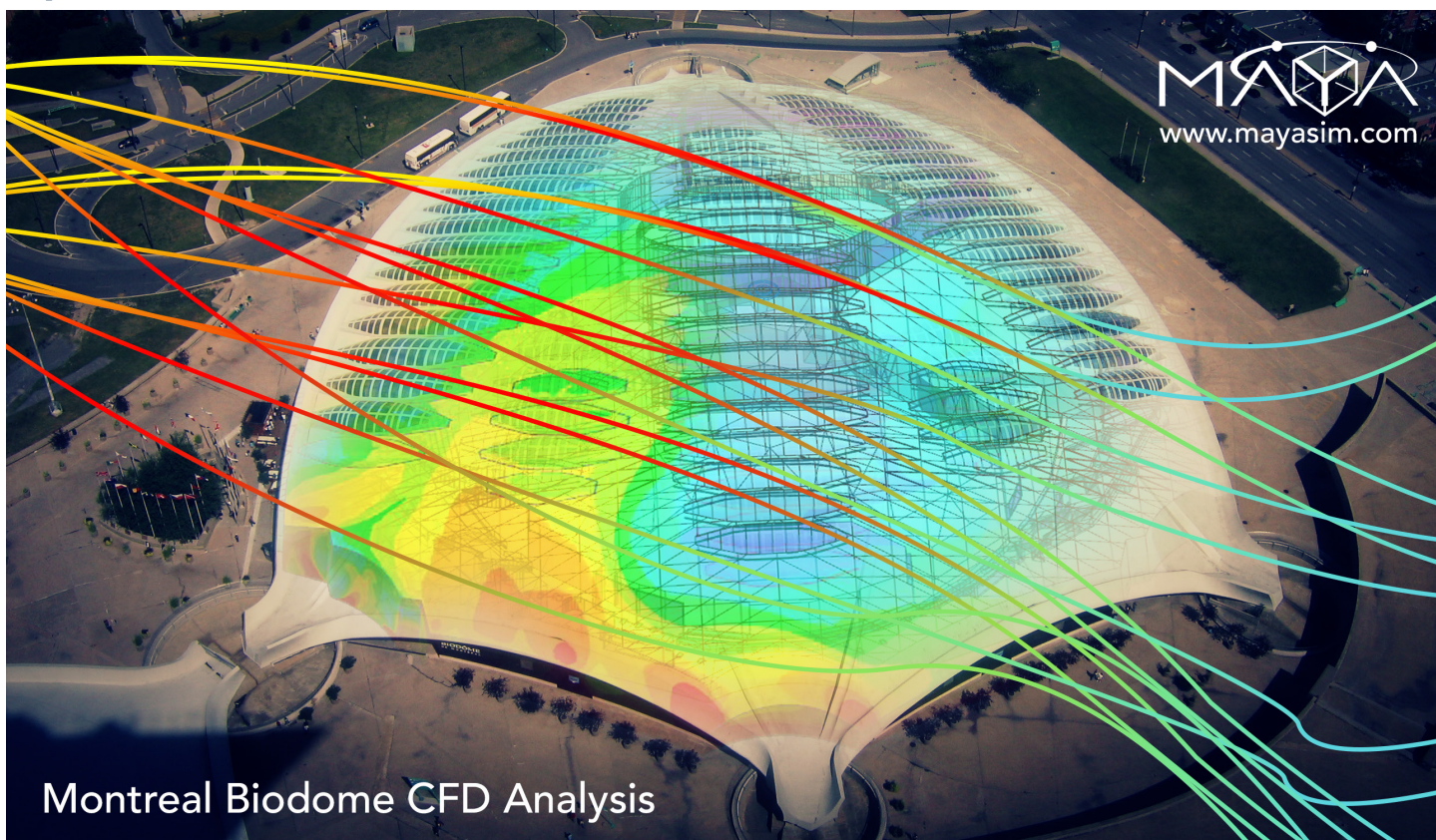




CFD analysis of the inner arch of the Biodome to optimize the comfort of the 800,000 annual visitors



MAYA Simulation's involvement : Analyze complex thermal problems.

"MAYA Simulation has been mandated for a thermo-fluid analysis to determine the exact causes of these events. Their involvement and recommendations in the project helped to understand and validate the assumptions in relation to very complex thermal problems. Everything is now positioned to develop a solution to optimize the comfort of the 800,000 annual visitors" said the project manager

The building that houses the Montreal Biodome is unique. Built in the former Olympic Velodrome, this building is a huge open space covered with a concrete roof filled with skylights. In each of the four ecosystems, a unique atmosphere has been recreated to reproduce the climatic conditions of the Rainforest, the Arctic, the Antarctic, the boreal forest and the St. Lawrence Gulf.

The unusual architecture and the unique conditions of temperature in the building have generated unintended convective movements and temperature stratification in the spaces. These complex phenomena can be assessed

and understood merely subjectively. Further evaluation by computer simulation (CFD) was required to understand them.

About MAYA Simulation:

- Largest Canadian company in the field of simulation
- Advanced expertise: Thermal transfer, fluid structure acoustics.
- Publisher and provider of solutions for CAD / CAE / PLM Siemens PLM
- + 130 engineers at Montreal to support our clients
- Based in Montreal since 30 years +