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Introduction  
Computational Method  
Simulation of Aerodynamics  
Simulation of AirFlow Systems

# Computational Simulation For Enhanced Vehicle Aerodynamics and Airflow Systems (EVAAS)

UoN Isuzu Kenya Training

CFD Laboratory  
UoN Department of Mechanical Engineering



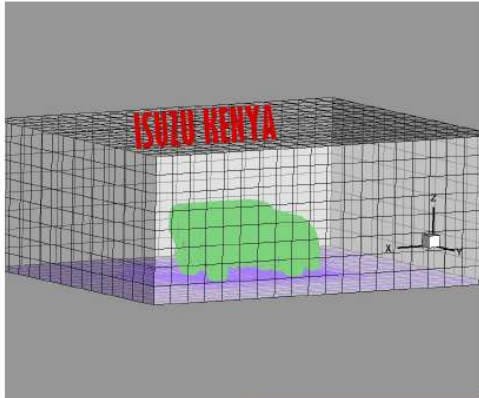
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Resources and Platform  
Geometry and Mesh  
Numerical Method - mass and momentum

## Mesh

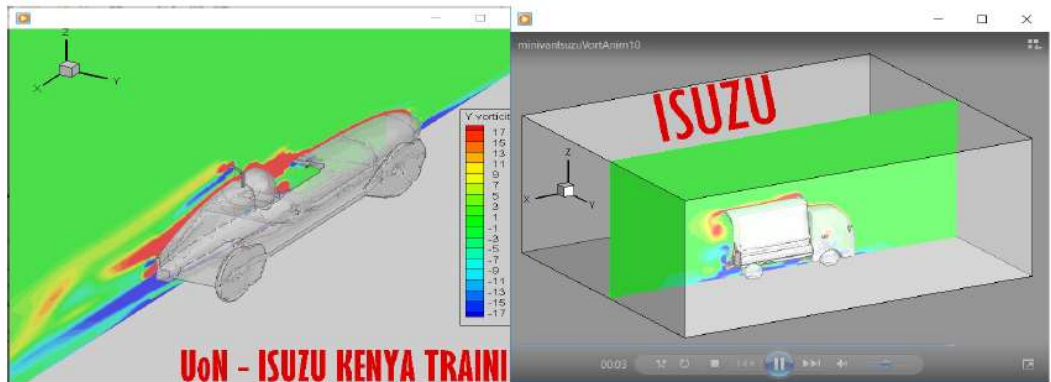
- This particular mesh was produced by the OpenFOAM® utility **SnappyHexMesh**, for hexahedral meshing
- The mesh can also be produced by using a CAD programme (e.g. AutoCAD, SolidWorks, Salome)



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## Vorticity Results - Aerodynamic Vehicle

- The wake behind the vehicles is as a result of boundary layer separation and being a region of **low pressure** a horizontal force (**drag**) arises.



## Internal Flow - mesh and geometry

- Key parameters are pressure drop and volumetric efficiency

