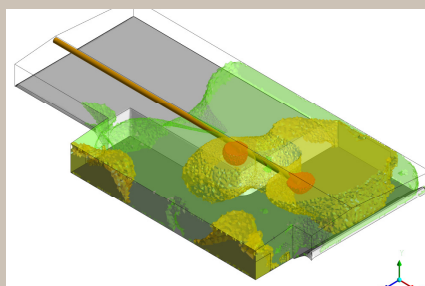
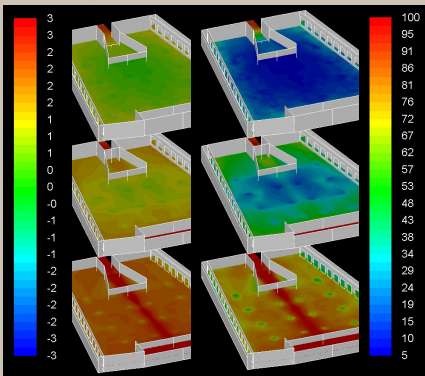
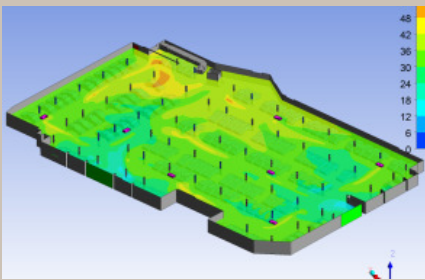
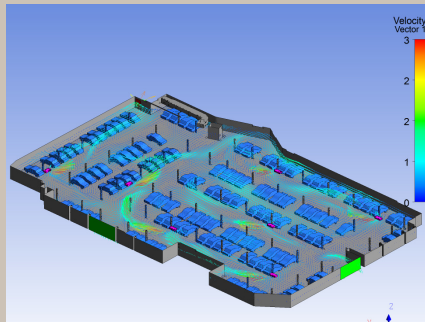


“Where will our knowledge take you?”

Computational Fluid Dynamics (CFD) In Built Environment



Air velocity in a jet fan ventilated car park (Top) Exhaust gas (CO in ppm) concentration in a jet fan ventilated car park (Second from Top) PMV(Predicted Mean Vote) and PPD(Predicted Percentage of Dissatisfied) for three level office building(Third from Top) Velocity magnitude iso-surfaces in the lead(Pb) export shed (Bottom)

Air quality and thermal comfort

BMT WBM has extensive experience in assessing a wide range of air quality and thermal comfort issues resulting from built environment development. These assessments often support HVAC design and occupational health and safety studies in an attempt to reduce associated personal impacts. A typical example of this capability can be best illustrated in the design and assessment of mechanically ventilated multi-level underground car parks. By using the 3D insightful information available from CFD analysis, the designer can optimize the HVAC system design while eliminating the risk of high exhaust gas concentration anywhere in the car parks.

Analysing the occupant comfort in high standard public and commercial buildings such as government office buildings, hospitals, movie theatre complex, train stations, and large shopping centres is another specialty service area where BMT WBM excellent experience

When investigating occupant comforts, the accurate representation of all relevant parameters (including the locations and flow rates of all air diffusers and exhausts, heat loads due to occupants, solar radiation, lighting and electrical equipment) is essential for the precise determination of building microclimate performance. BMT developed and implemented all the necessary programs in the CFD model and thermal comfort metrics satisfying ISO and ASHRAE standards may be straightforwardly investigated.

BMT's experience includes the following key service areas:

- Car park ventilation design assessment
- Indoor air quality assessment for high-standard buildings
- Export shed dust extraction design assessment
- Occupancy comfort and thermal comfort assessment as for ISO and ASHRAE standards for new buildings.

To communicate with a CFD specialist at BMT WBM please contact:

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