



ABOUT WEB EARTH.

Web Earth are leading consultants in environmentally sustainable design, providing holistic solutions to create resilient and cost-saving buildings and infrastructures.

Established in 2011, Web Earth's environmental design team grew within acclaimed engineering firm Web Structures and we enjoy direct access to our parent company's world-class expertise. Our international diversity—in our team members' qualifications and the countries where we work—provides fertile ground for innovative solutions.

Visit our website at: www.webearth.com.sg

DATA COLLECTION.

Building data collection is the first step to an environmental audit of the existing building. Collection of data includes:

- Existing ACMV and Lighting drawings, product catalogues and data sheets
- Past operational performances of the building such as energy consumption, cooling load and indoor thermal parameters
- Feedback from building users and Facility Management (FM) team

REVIEW AND ANALYSIS.

Technical simulations such as dynamic energy modelling and Computational Fluid Dynamics (CFD) are conducted to review and analyse the current issues of the building for improvements.

SOLUTION PROPOSAL.

Solutions are proposed to tackle the issues identified in the previous stage. The proposed solutions involve energy optimization strategies to capture both energy saving and better thermal comfort of the building.

Solutions include optimum chiller operating sequences to reduce air-conditioning energy consumptions, replacement of ACMV system with minimum cost impact and changes in the building layout such as windows and openings without major construction work involved.

Dynamic energy modelling simulation is performed again with the corrective measures to ensure the optimum performance of the existing building is achieved.

VERIFICATION.

Verification involves performance check after the retrofitting work or changes to ensure energy saving and thermal comfort of the building. Coordination with FM team is involved to ensure operational strategies are well-performed.

For more information, please contact Ms Jessie Tan, Director-Projects: jessietan@webstruc.net

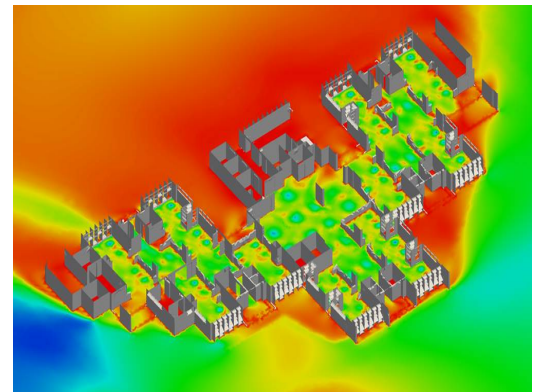


Surface Temperature Measurement



Credit: Web Earth

Outdoor Lux Measurement



Thermal Comfort Simulation Result



Internal Air Distribution Modelling