

Future Projects

Laboratory Humidity & Temperature Enhancement

Limitation of existing central air handling units (AHU) design is that some laboratories often experience either humidity level too high, or temperature too low, especially during shoulder seasons. Current practice is to apply electrical reheat in the AHU serving laboratories that require better humidity control. However, this is very energy inefficient. Following scopes are included in this project.

- Studied and analyzed current temperature and humidity issues at approx. 63,000 m² of laboratories and research facilities with various and wide range of temperature and humidity user requirements.
- Developed short-, medium- and long-term strategies to enhance humidity and temperature control at these facilities.
- All strategies were chosen based on their technical feasibility, effectiveness, resilience, energy efficiency, and lifecycle cost.
- Strategies developed included decoupling latent and sensible cooling loads with the addition of central dedicated outdoor air units to work hand in hand with clusters of air handling units.

