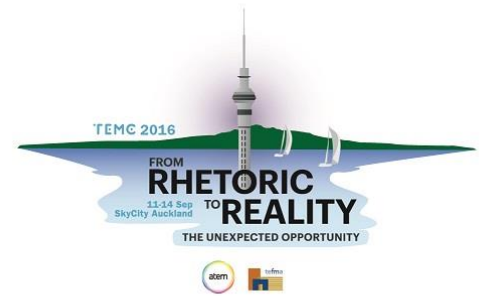


Concurrent Session K
Wednesday 14 September 2016
1:00pm – 1:50pm



Session 1
Addressing Thermal Comfort Needs Without Breaking the Bank
While Keeping the Occupants Happy
James Hepi, Garrit Schot
Deakin University

James commenced his career in the Building Industry in 1980 as a Carpenter and Joiner. He progressed into his own building business, which he conducted for 18 years. He then moved into Facility Management and then Project management. He has been in the educational sector since 2005.

James worked for both Box Hill and Kangan Institutes before moving to Deakin University's Facility Services Division. During this time he undertook a diverse range of projects ranging from infrastructure, maintenance works, building refurbishments to major HVAC upgrades. He successfully delivered the complicated Thermal Comfort Project involving installation of centralized plant and distribution of chilled and heated water across 5 occupied buildings. The project was achieved within a tight timeline of 38 weeks. James's managed the construction team and stakeholders engagement. On site each day he dealt with any issues that cropped up and addressed them without impacting the project timeline and deliverables.

Garrit first joined Cundall Australia in 2005, after gaining three years international experience in Cundall's London office. He became Director in 2013 and leads the building services team offering in Australia. Garrit has over fifteen years' experience working for leading consulting and contracting engineering firms, including project work in the UK, China, Fiji, Sudan, New Zealand and Australia.

Garrit's time in the building services industry has given him a broad base of experience, across a range of new and existing buildings. He is particularly focussed on delivering environmentally responsive, practical and energy efficient buildings that provide a positive long lasting effect on building occupants.

The Thermal Comfort Project, at Deakin University's Burwood campus, was a \$14.3 million project to provide thermal comfort across a number of major buildings that had no mechanically assisted ventilation or air conditioning. The Project responded to widespread and intractable staff complaints about environmental conditions and was supported by an in depth study that both identified and prioritized the problems.

Since the introduction of Trimester 3, and subsequent increased usage of teaching spaces, there had been an increase in work requests and complaints from students and staff within these buildings. In the 12 months prior to the approval of the Project, Facilities Services Division had received more than 100 complaints relating to excessive heat and lost time by staff.

The complexity of the problem was exacerbated by the fact that a large amount of Deakin's floor space at the Burwood campus was being provided in 'legacy' buildings, some dating back over 40 years. A standard approach to these types of problems had been to simply provide packaged air conditioning. This was seen as being both high cost in delivery and operation and a poor outcome in

terms of sustainability. Demolition and replacement of buildings was considered but was estimated to far exceed available funds while causing major disruption to the campus.

A solution that provided a mix of central plant and an integrated program of major upgrades was decided on by the University. The program would involve major works on 24 floors within five discrete buildings across the campus. To successfully meet strict timelines, and optimize the integrated solutions proposed, the works would need to be carried out concurrently. This needed to be done with minimal disruption to the building's occupants and maintaining the ongoing operation of the University.

At the same time the Thermal Comfort Project was being proposed the University had a major program underway redeveloping and refurbishing significant space on the campus following the opening of a major new building. This presented opportunities to consolidate and decant while also adding to the potential for disruption on the campus.

To succeed the program would need to be well integrated across the campus, require an extensive but inclusive communications strategy and adhere to the strict timelines agreed by the University. It did, with the Thermal Comfort Project being delivered on time and on budget.

This session will share the initial brief, the difficulties addressed in developing the project, the solutions implemented, how sustainability was addressed, the communication strategy adopted and how campus disruption was minimized. The technical solutions adopted by the project will also be outlined.

The problems addressed by Deakin within this project are similar to those facing many other universities across Australia and New Zealand; aged building assets, a need for improved infrastructure, heightened expectation of work environments, delivery of a complex project in a constrained environment and the need to deliver a sustainable outcome.

Learning outcomes:

- The process for the prioritization of competing demands.
- Using a detailed communication plan and stakeholder engagement process.
- Aligning a roadmap across the timeframes of planning and organizational decision making.