Our Response to the World Outside

The Evolution of Envelope and Comfort

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THINKING

We are design-led with a passion for making a positive contribution to our built environment.

Our focus is the façade which plays a pivotal role in the building's overall performance and the occupants’ wellbeing.
THE INHABIT DIFFERENCE

Collaborative
We achieve more by working together and leveraging collective capabilities to achieve the desired client outcomes.

Service Matters
We seek to fully understand our clients’ aspirations to deliver outstanding solutions, exceeding their expectations.

Our People
We are all accountable in creating and promoting an environment where people are supported and empowered to grow and succeed.

Agile
We adapt responsibly to capture opportunities.

Progressive
We lead the way in challenging the status quo, and in never giving up to find an innovative solution.
Through the mechanism of thermal comfort we explore how architecture and technology enable us to enhance the experience of the built environment in the past, the now, and the future. The dimension of time allows us to consider our own ingenuity through the advancement of building envelope technology, and the cost of that ingenuity through climate change.
90% of employees admitted that their attitude about work is adversely affected by the quality of their workplace environment.
Optimising building performance for human health and our environment.
Building design opened up dramatically with new technology + more flexible construction options

→ Aesthetics overtook function

What impact did this have?
- Comfort
- Daylight
- Energy efficiency
- Occupant satisfaction
- Owner impacts
Inhabit office, relocated to SYDNEY climate
Single glazed
- Comfort – ok
- Daylight – ok
- Energy efficiency – ok
Present building

Driven by code allowances (to 2016)
Up to 100% WWR
Double glazed

• Comfort – good
• Daylight – improved
• Energy efficiency – worse!
Future building – industry standard

Driven by 2019 code
Double glazed
No greater than ~60% WWR (products & cost)

- Comfort – good
- Daylight – great (optimised layout)
- Energy efficiency – ~30% better than “present”
< RHW 2.0 TOWER
VIENNA

THE HOUSE AT
CORNELL TECH >
NEW YORK CITY
Daylight
Climate Change

CO₂ Emissions

Energy Use Intensity - Climate Impact

Peak Demand - Climate Impact

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Stranded Assets

In the face of climate change – what assets will be:

- Uncomfortable – system capacities
- Too costly to run
- Impossible to insure
- Not resilient – heat, storms, brown/blackouts
Opportunity

Looking at climate change – what assets will be:

- **More valuable** – easy to rent, cheap to run
  - Lower finance costs
- **More resilient**
- **Higher ROI** with ancillary benefits
  - Productivity
  - Presentee/absenteeism

A value proposition.
Graph 1 Frequency of days over 35ºC in Penrith 2000-2019

Data source: Bureau of Meteorology Penrith Lakes
Projections for Penrith. Number of days ≥ 35°C, based on current policies

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building a greenhouse in a climate emergency

[is] a pretty odd thing to do