



positiveenergyplaces

**zero carbon life for
all**

**rob brimblecombe &
dave collins**

what we're about...

- creating engaging, beautiful and functional places for people to experience and thrive
- giving meaning to 'sustainability'
- making sustainability profitable



who we are...

dave collins

- director, Synergetics Environmental Engineering
- thermodynamics & fluid mechanics specialist



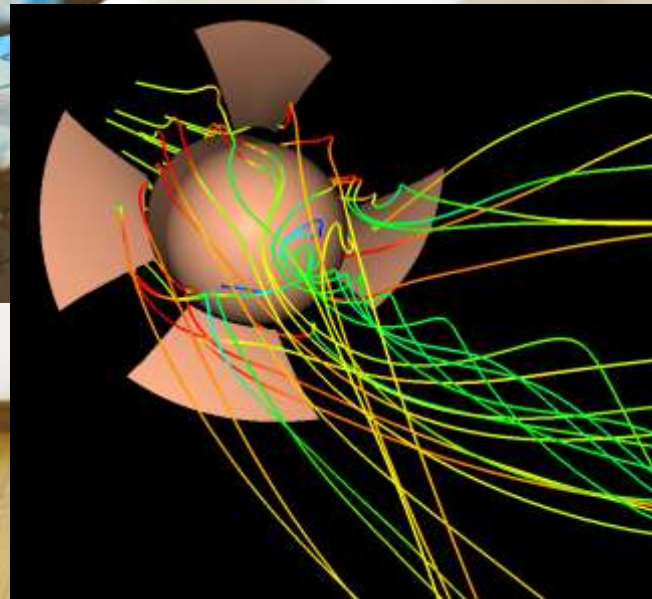
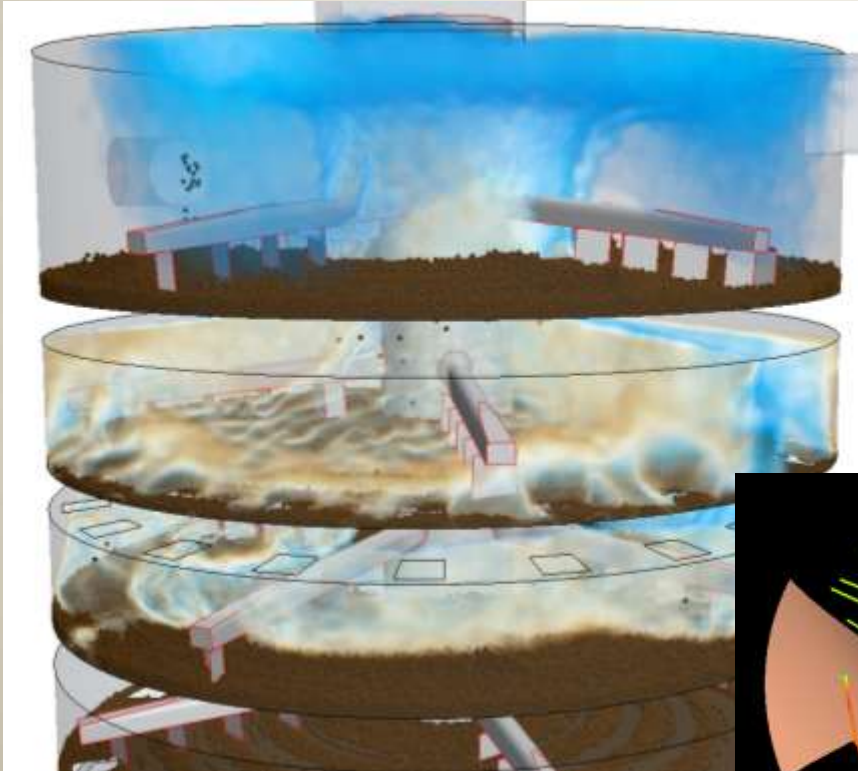
rob brimblecombe

- sustainability manager, monash university
- bio-mimicry specialist



what we do...

- complex process simulation
- deep insights &
- extraordinary solutions



what defines most buildings?

*competing interests considered in isolation
death by a thousand compromises
forgot to check the physics
ignored the biology
devil in the detail*

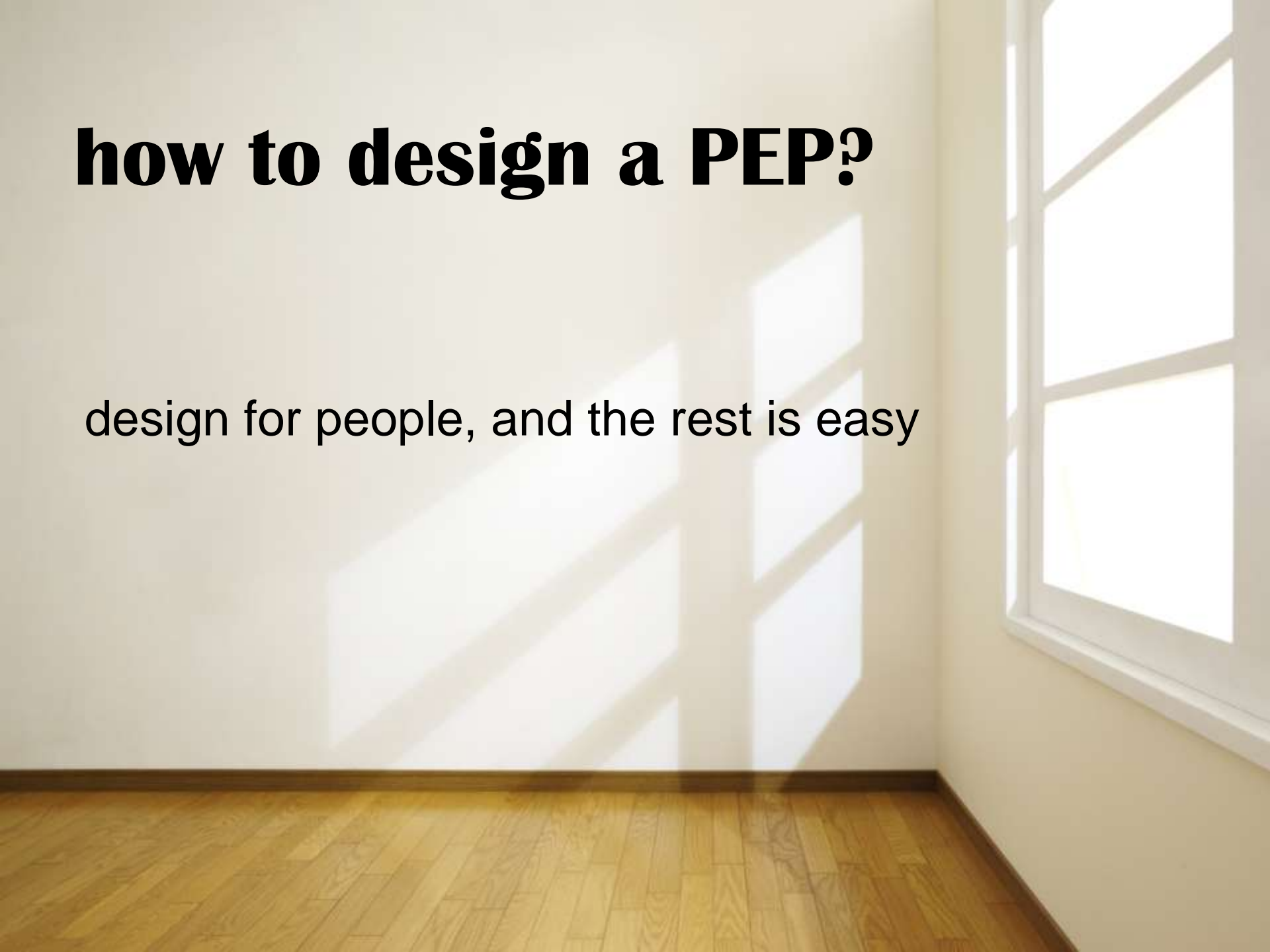
what are PEPs?

buildings and systems that are positive energy in every meaning;

- energy - produce all energy onsite;
- people - inspired by and want to spend time in; and
- community - build community inside and outside

how to design a PEP?

design for people, and the rest is easy



PEP rules...

- functional
- resilient
- community
- engagement
- air quality and thermal comfort



community...

- design for local community
- for like-minded people
- places people are proud of



engagement...

- with each other
- with surroundings
- with built environment



air quality and thermal comfort...

- access to fresh air, natural light & views
- thermal comfort tailored to meet everyone's needs



positive energy in every way...

- productive
- simplicity
- low maintenance
- renewable energy



current projects...

- 490 spencer street – proof of concept
- monash library asset replacement plan
- monash warehouse to office retrofit
- 11 leveson street – commercial office retrofit

490 spencer street - proof of concept



- investment \$300K
- space utilisation
- smash energy consumption
- improved amenities

490 spencer street - proof of concept





concept

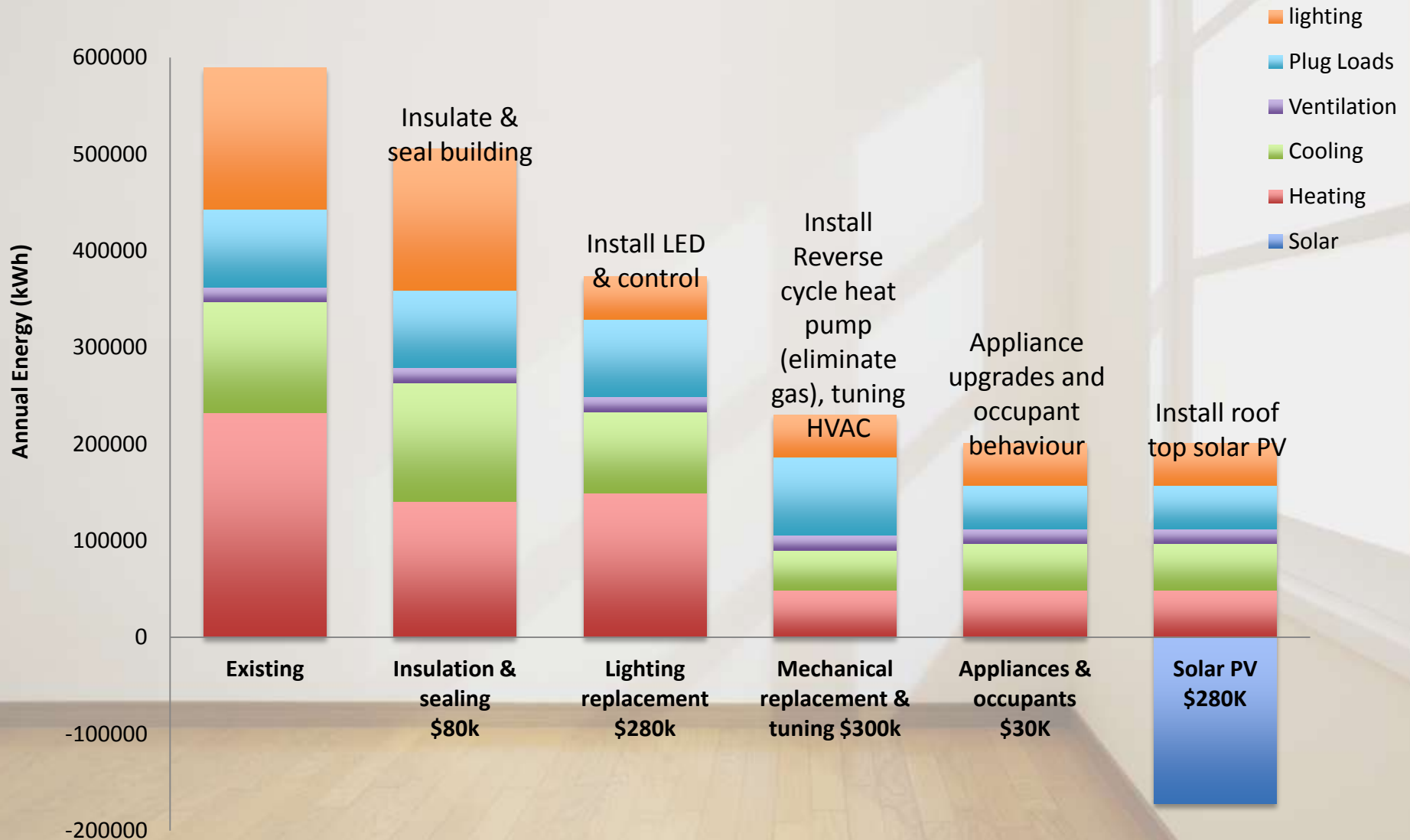


Proof is in the performance and transparency

monash library - replacement plan

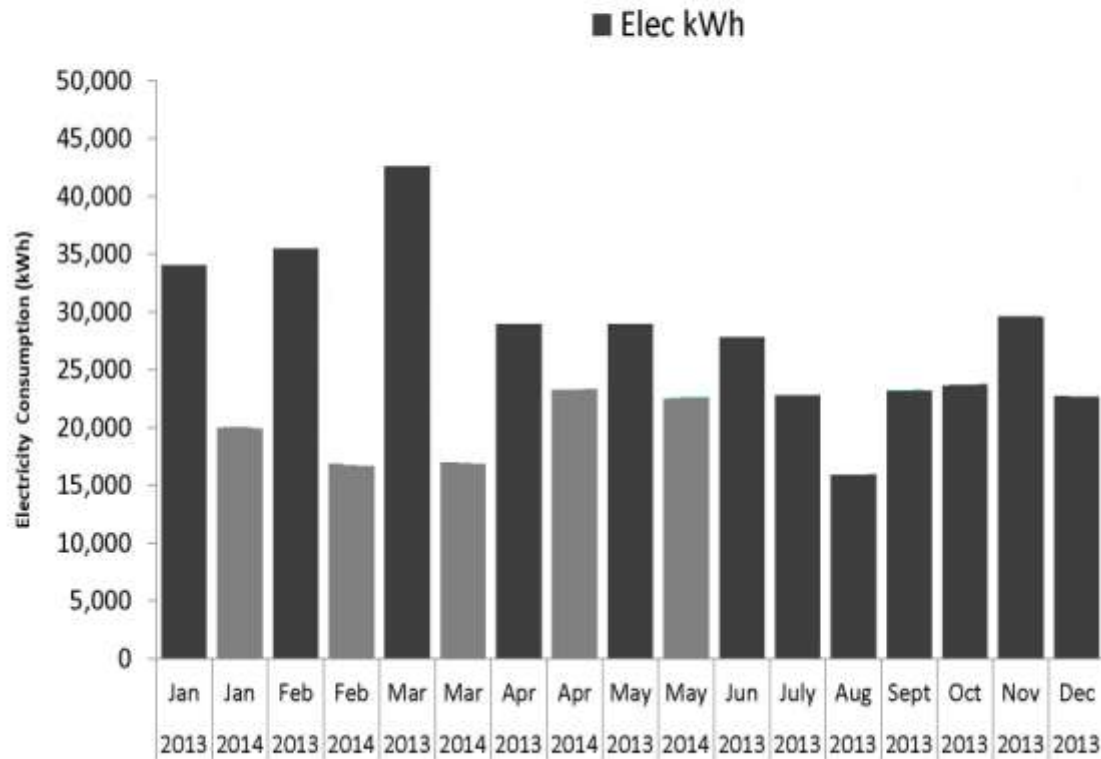


monash library - replacement plan



monash library - replacement plan

Peninsula Library – Lighting Upgrade & Solar Installation



monash warehouse – PEP retrofit

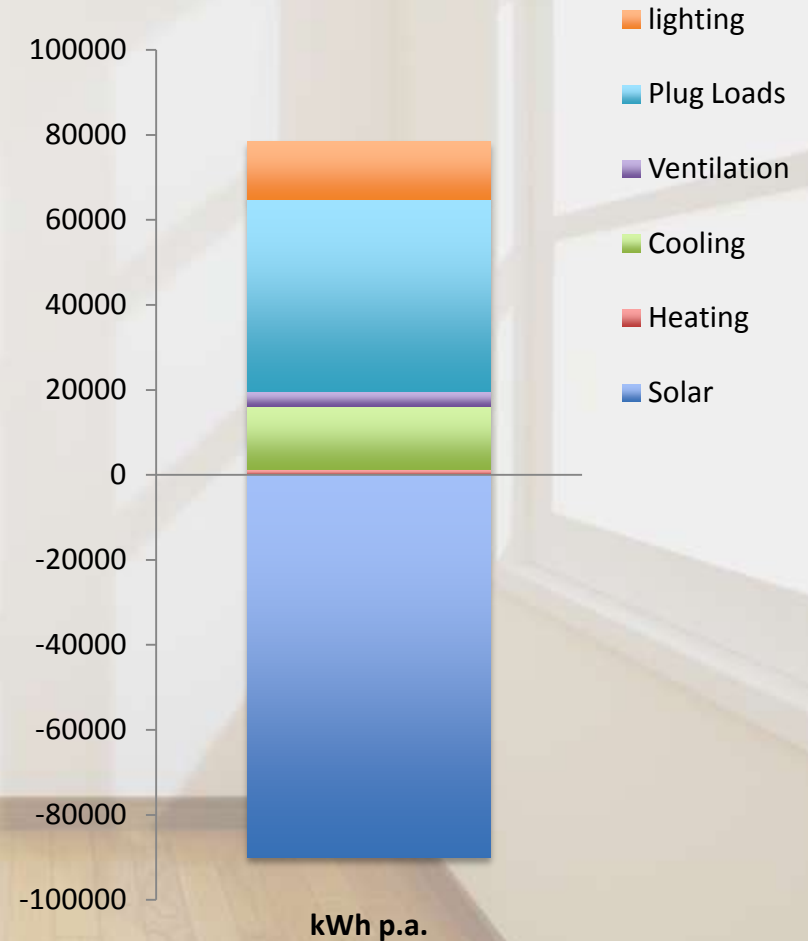
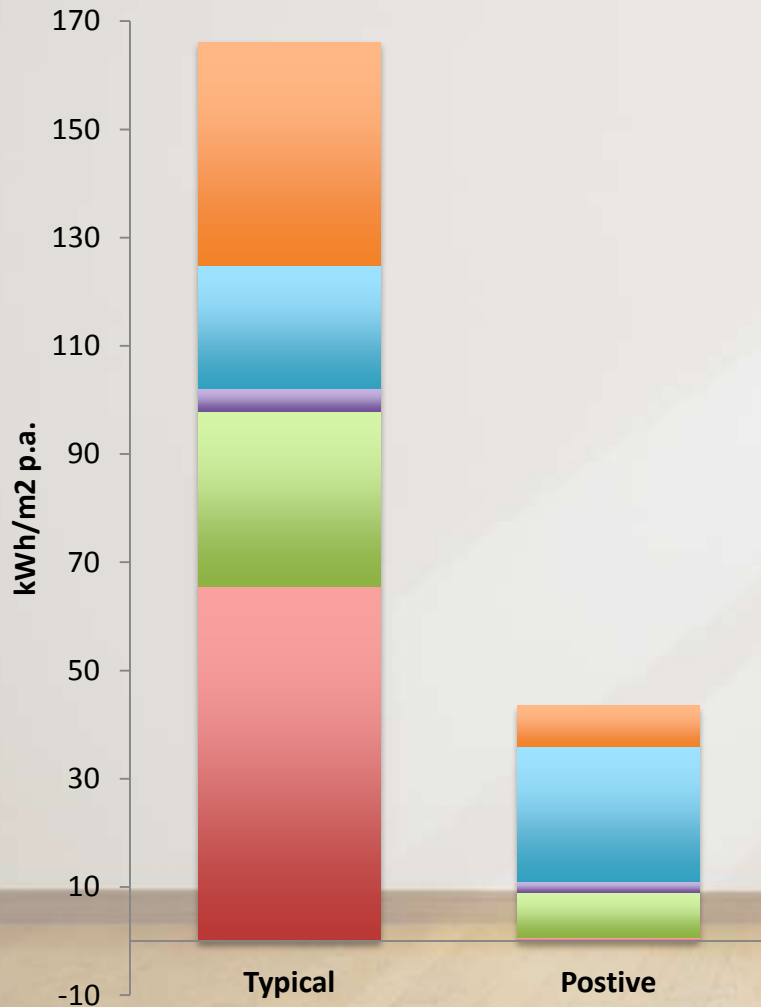


monash warehouse – PEP retrofit

- well insulated airtight envelope
- natural lighting
- view to the outside
- 100% fresh air
- same total cost
- cost premiums offset by savings in building services
- completion late 2014



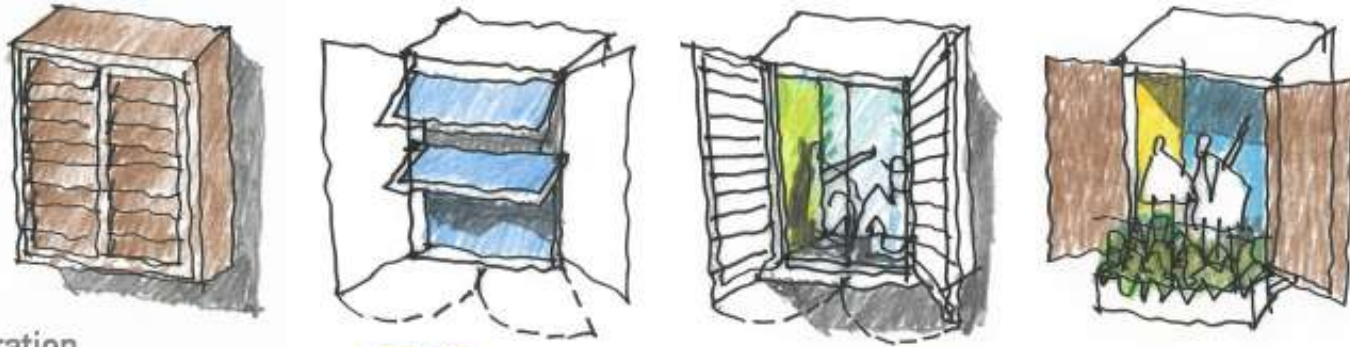
monash warehouse – PEP retrofit



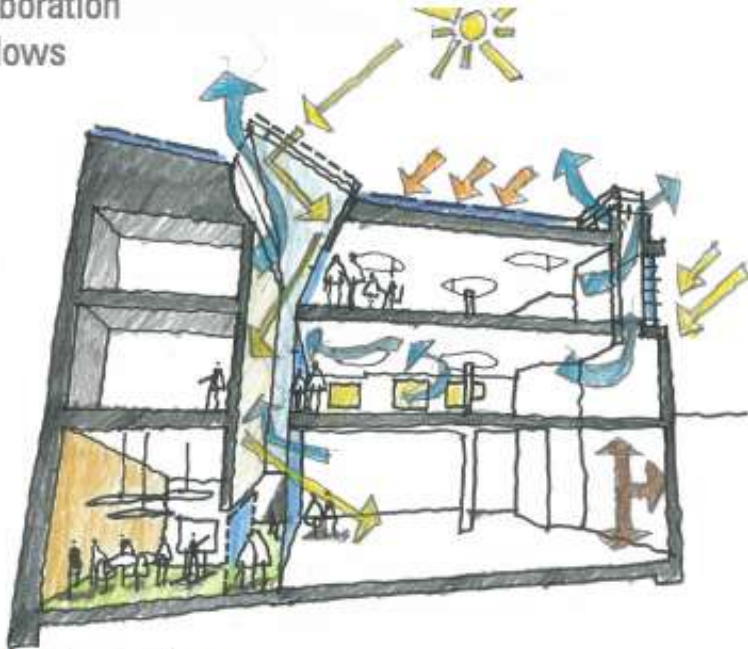
11 Leveson Street – PEP retrofit



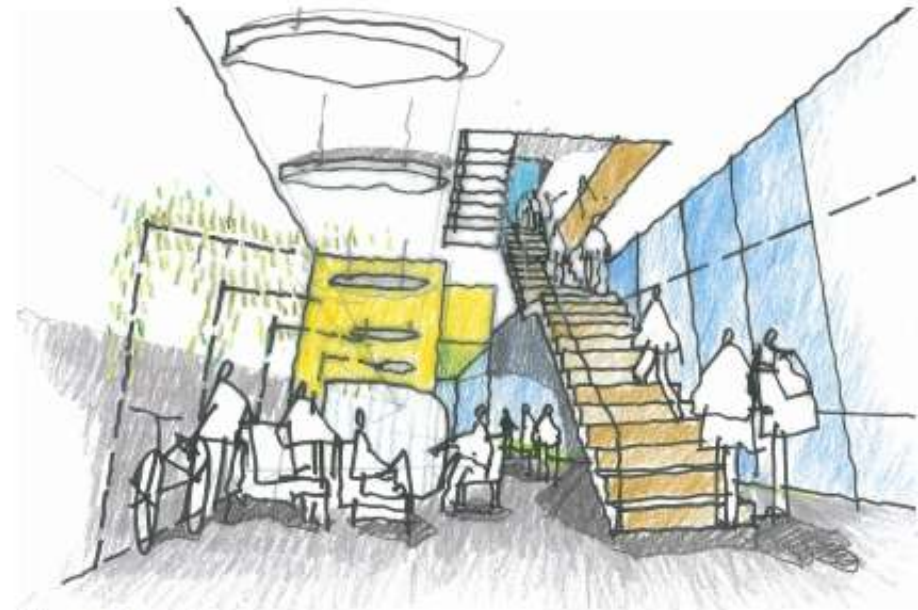
11 Leveson Street – PEP retrofit



collaboration
windows



bioclimatic section



interactive foyer

what can I do?...

- tenants – tell us about your property needs
- finance providers – invest in our property secured investments with premium returns
- equipment and technology suppliers - tell us about your low energy products
- building owners – partner with us to retrofit your buildings
- developers – partner with us to create PEPs
- everyone – join the revolution...tell your friends, phone us share ideas

thank you...

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