

Shifting the Horizon

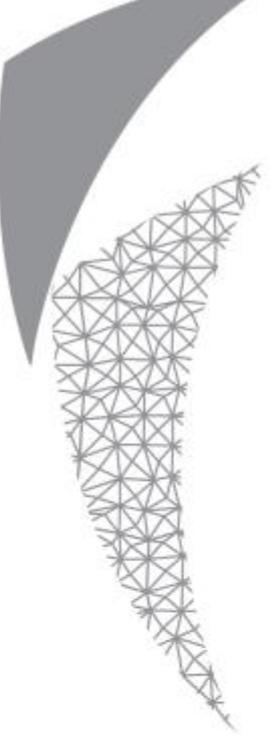
Risks and Rewards of University Building Adaption

Claire Moritz, Economist

Stewart Mann, Building Services Engineer

Sinclair Knight Merz

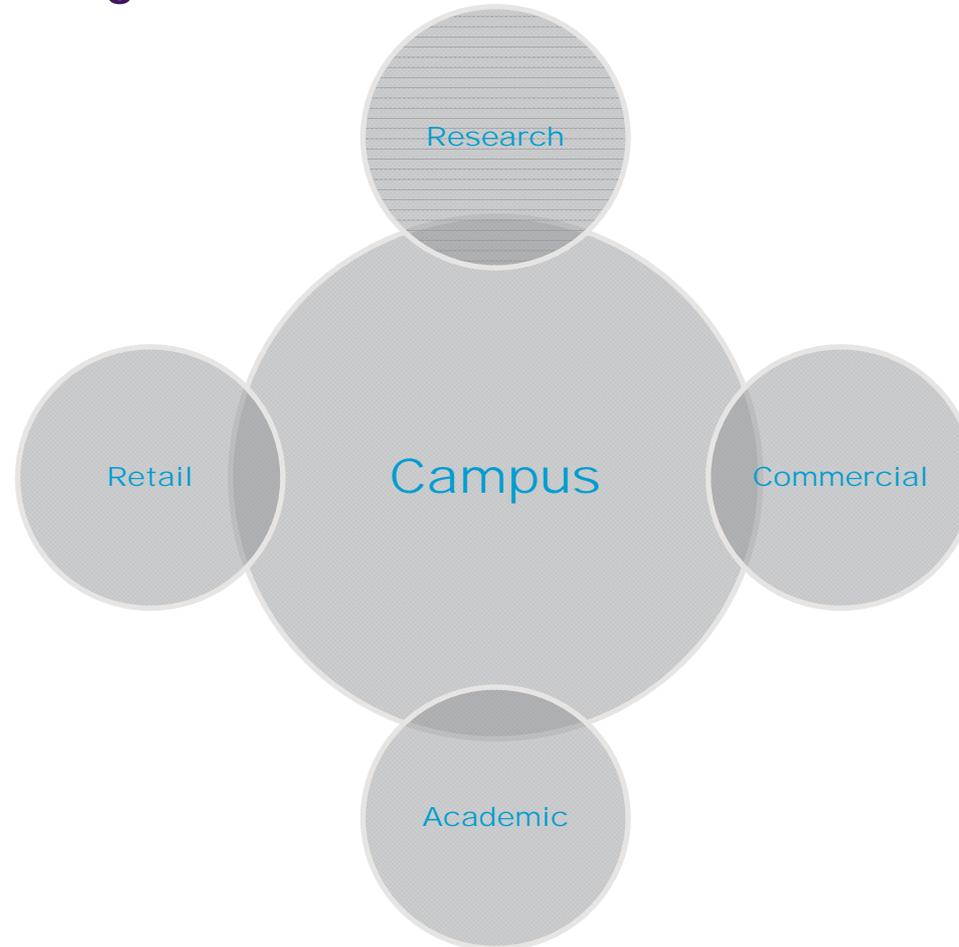
Buildings and Infrastructure, South East Asia



Contents

- → Future campus considerations
- → Flexibility
- → Infrastructure Constraints and opportunities
- → Sustainable
- → Efficiency

Competing Interests



Flexible





Flexible

Funding- sources and
service requirements

Partnership demands

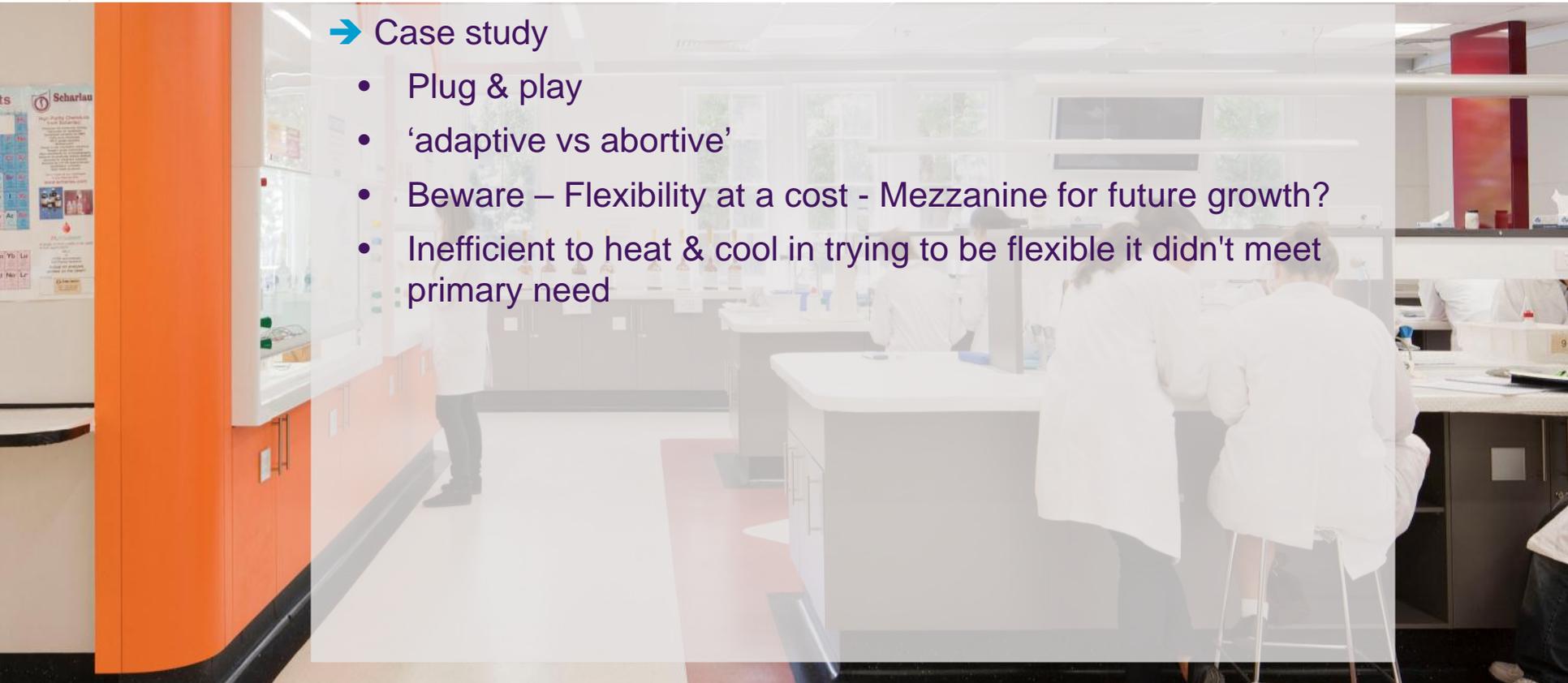
Long term vs short
term

Branded Building

Commercial lease
type approach



Flexibility trade offs

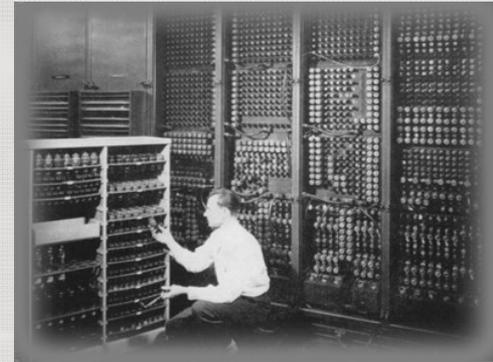


→ Case study

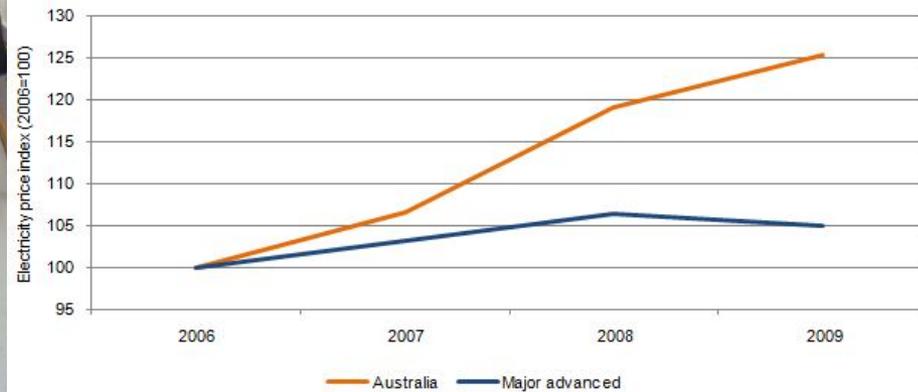
- Plug & play
- 'adaptive vs abortive'
- Beware – Flexibility at a cost - Mezzanine for future growth?
- Inefficient to heat & cool in trying to be flexible it didn't meet primary need



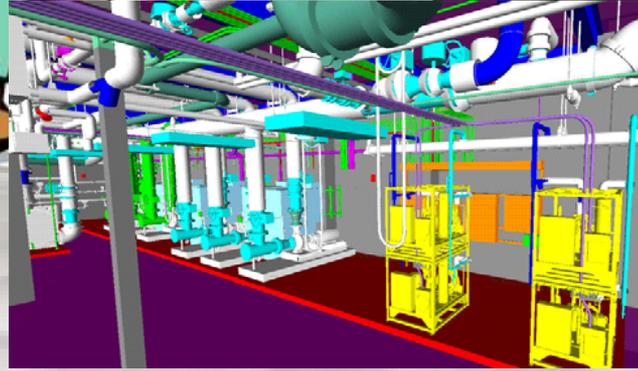
Infrastructure



Infrastructure – Services Backbone



Infrastructure – Services Backbone



Infrastructure – Services Backbone



Infrastructure – Services Backbone

- Improved knowledge of assets
- Greater shared knowledge of assets
- Investment through knowledge not reaction
- Longer view (horizon) means paybacks can be longer on investments
- Improved Maintenance Profile
- Known Intervention Points
- Flexibility of infrastructure for improved estate performance

Infrastructure – Buildings



Infrastructure – Buildings

To reduce a **buildings carbon footprint**, it is important that a **simple energy hierarchy** is used.

Reduce the need for energy
in the buildings design

Use energy more efficiently
in the building

Supply energy from
renewable sources

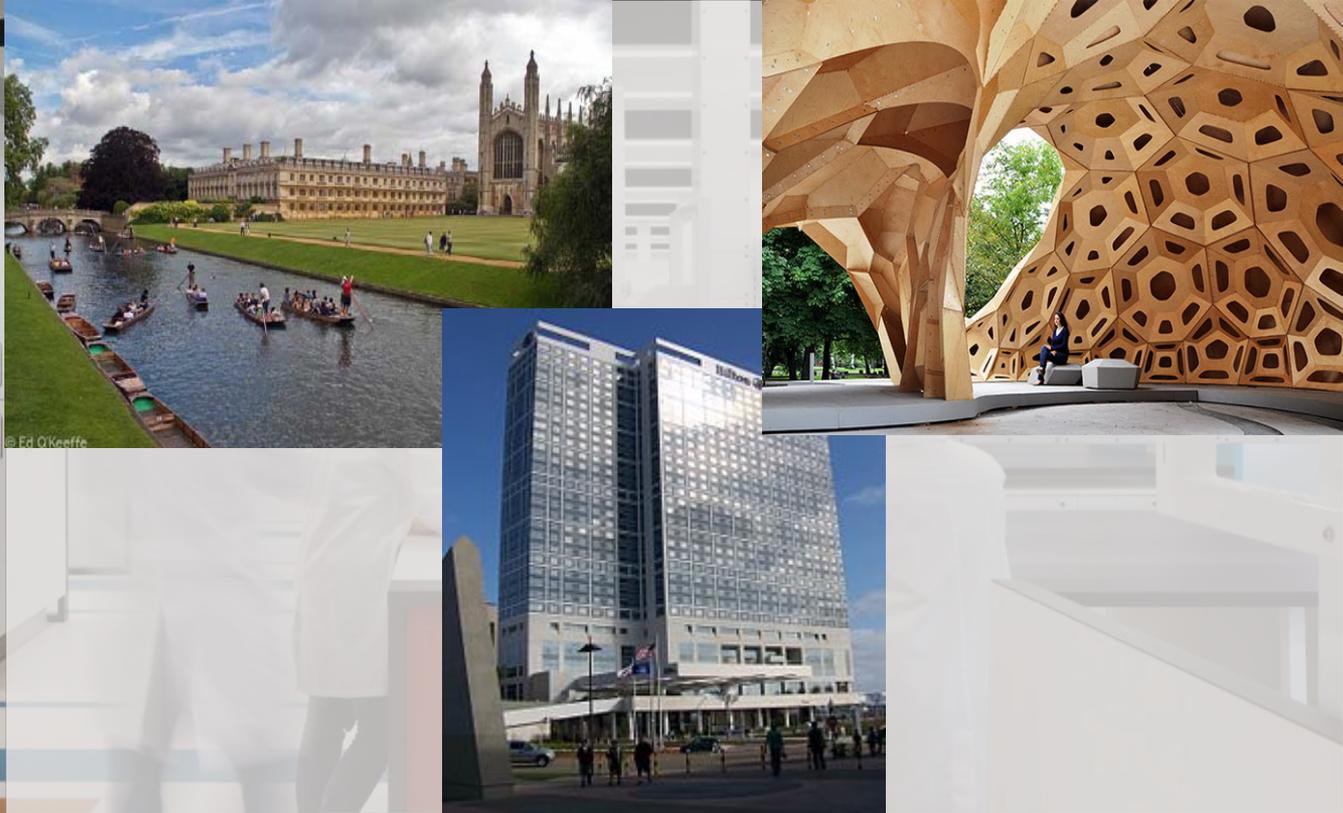
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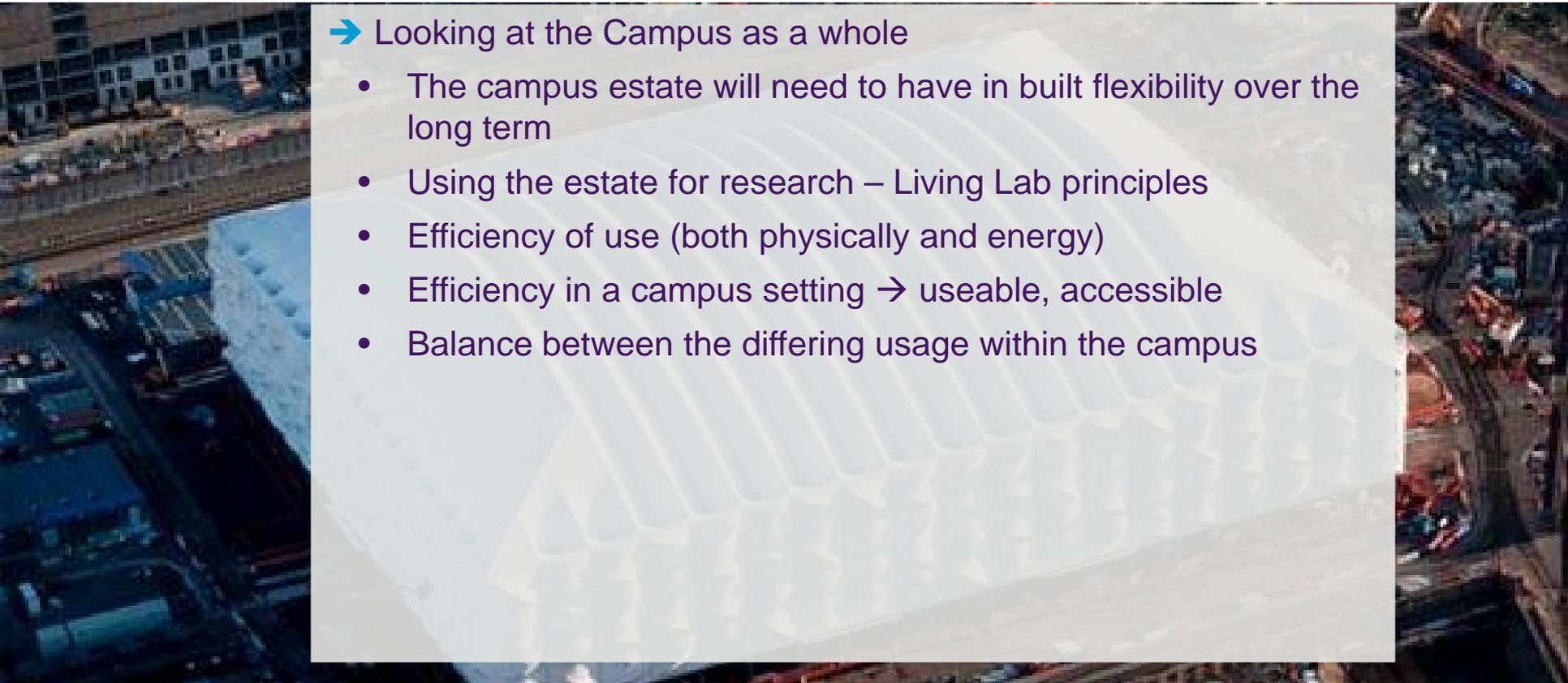


Infrastructure – Buildings





Infrastructure - Buildings



→ Looking at the Campus as a whole

- The campus estate will need to have in built flexibility over the long term
- Using the estate for research – Living Lab principles
- Efficiency of use (both physically and energy)
- Efficiency in a campus setting → useable, accessible
- Balance between the differing usage within the campus

Campus Evolution Case Studies – UoM Chemistry Labs



Campus Evolution Case Studies - WEHI





Campus Evolution Case Studies – London Basketball





Conclusions

→ Taking a long view shifting the horizon

- 150 years instead of 60 years
 - Flexibility – more with less
 - Sustainability – more with less
 - Efficiency of use – new teaching principles
 - Understanding the need
 - Efficiency in a campus setting → useable, accessible
- 