



# Future Proofing Universities

Tertiary Education Management Conference, Cairns

**Hames**  
**Sharley**

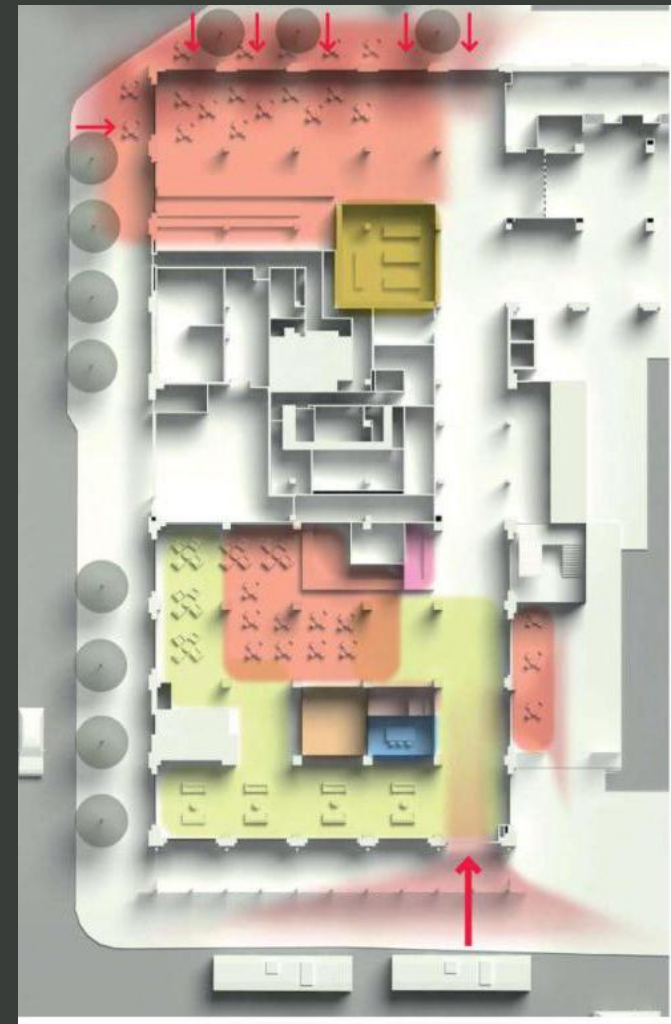
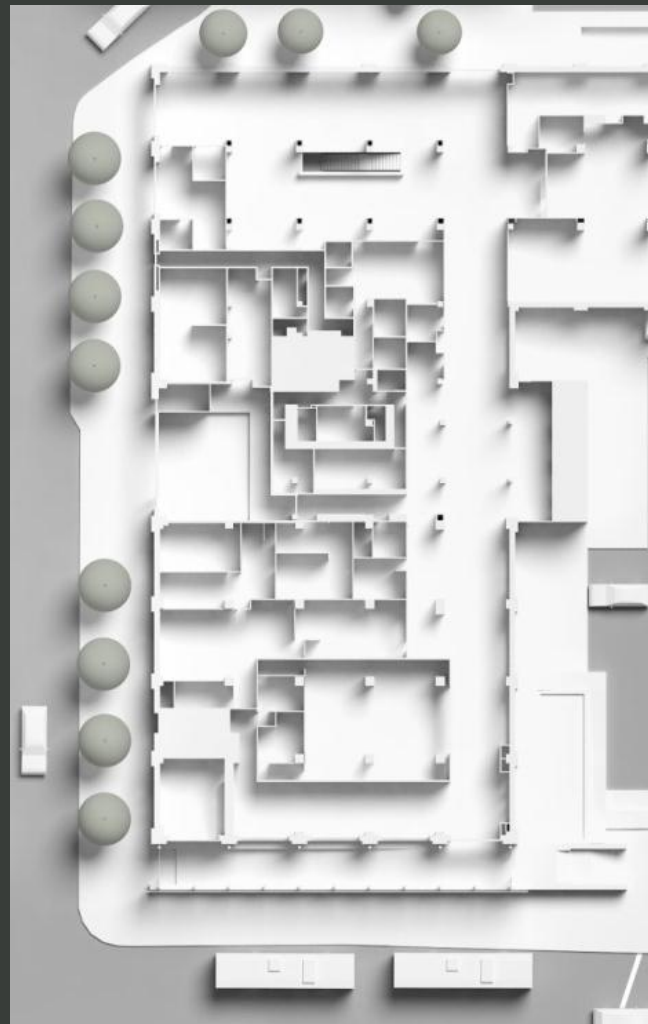
2<sup>nd</sup> September 2014 - John Miller

ARCHITECTURE | INTERIORS | URBAN DESIGN | PLANNING | LANDSCAPE



## Definition

‘Unlikely to become obsolete’  
Key attribute of sustainability



Student Hub for Australian Catholic University  
Source: Hassell

Future Proofing Universities



Adaptability is strategic, it allows for functions to change or expand

Flexibility is tactical, more short term

Informatics Forum, University of Edinburgh  
Source: Bennetts Associates

Future Proofing Universities





# University of Cranfield

Aerial View of University of Cranfield, UK  
Source: Google maps



Sports

Car Parks

Residences

Health

Tutorial rooms / offices

Lecture Theatres

Libraries

Research Laboratories

Shops

Residences

Churches

Teaching Laboratories

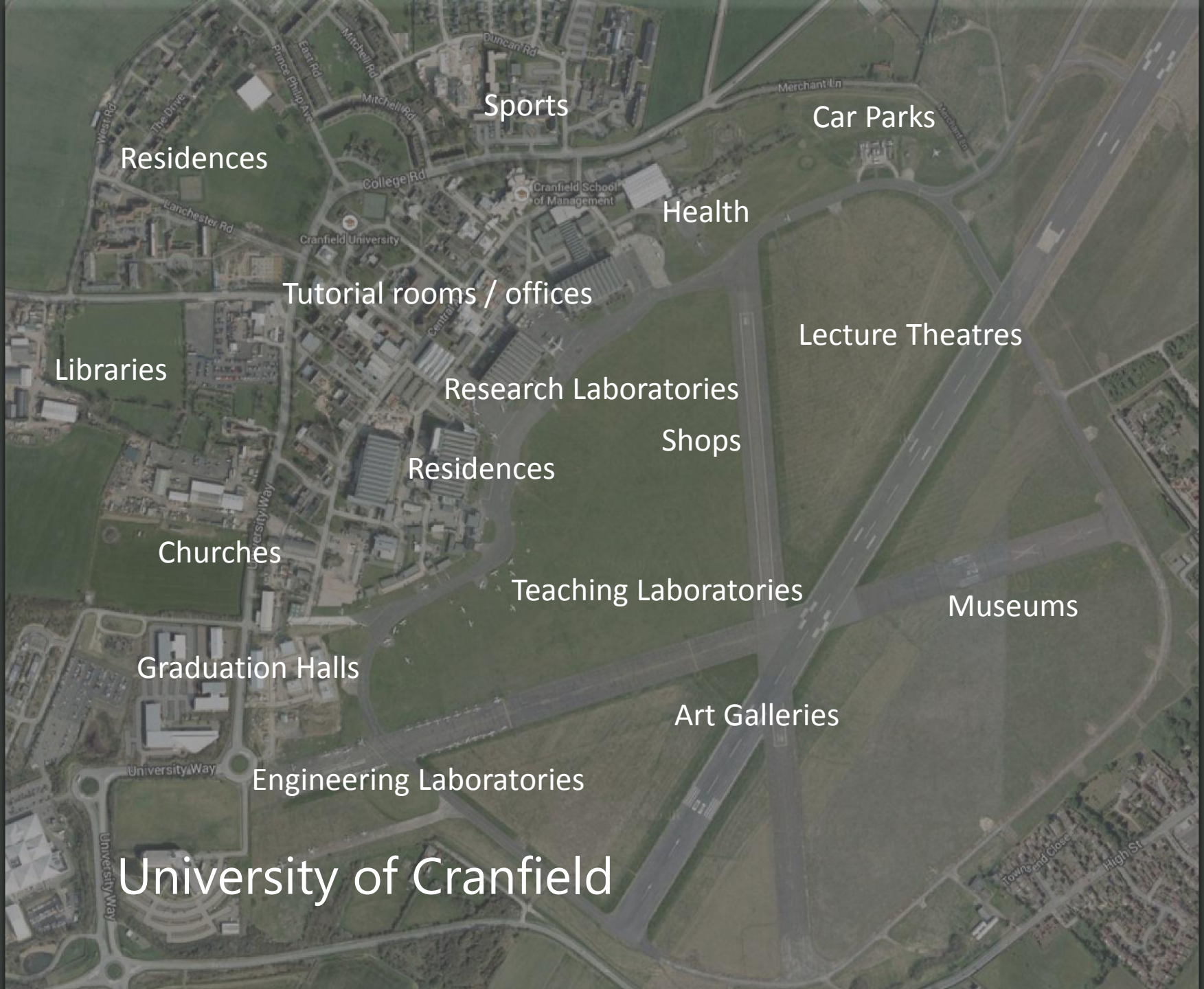
Museums

Graduation Halls

Art Galleries

Engineering Laboratories

University of Cranfield







More Flexible

Less Flexible



Tutorial rooms / offices

Residences

Car Parks

Shops

Cafes

Sports

Art Galleries

Libraries

Churches

Museums

Research Laboratories

Health

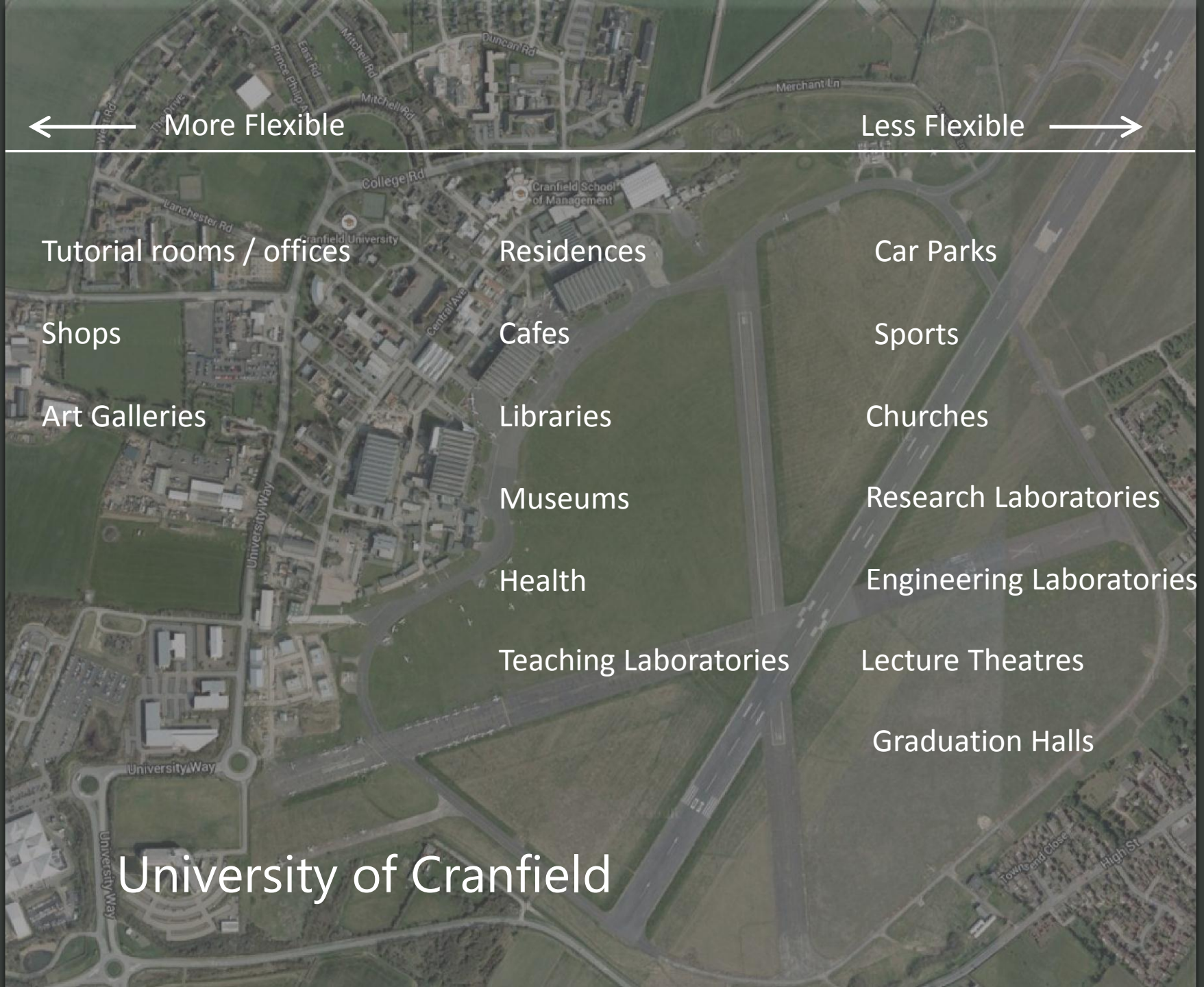
Engineering Laboratories

Teaching Laboratories

Lecture Theatres

Graduation Halls

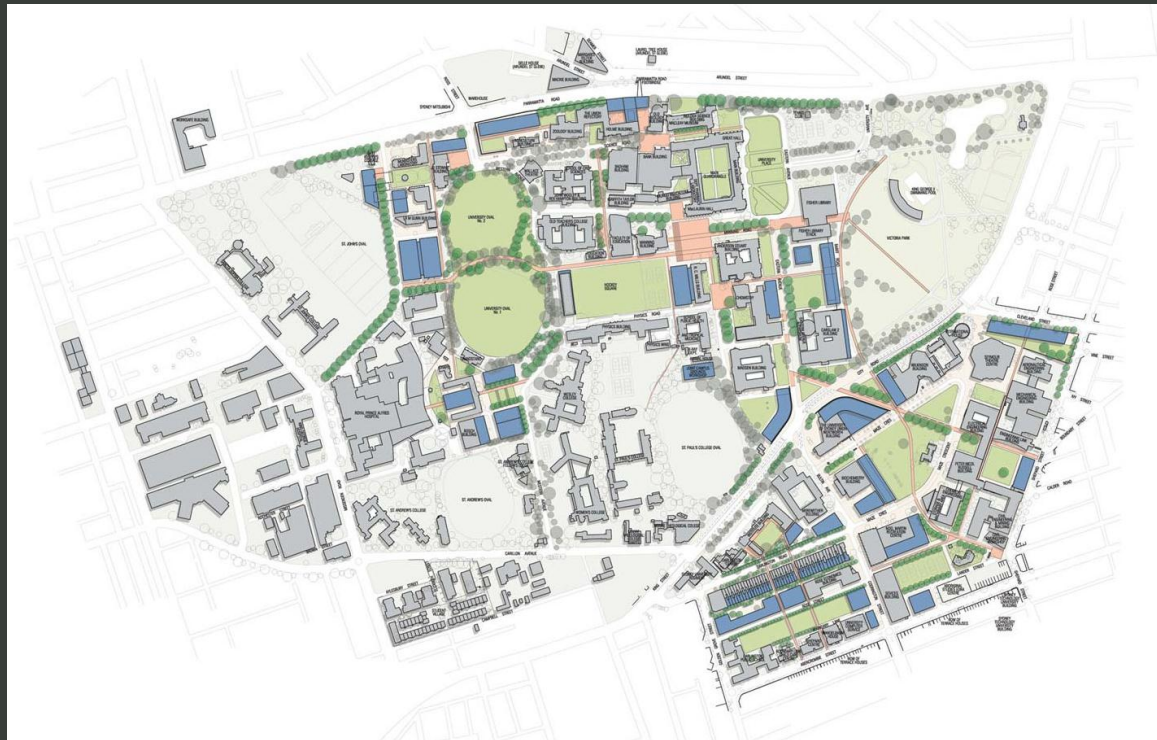
University of Cranfield





# Potential Change

- Services delivery
- Technology
- Legislation
- Political
- Financial



University of Sydney Campus Master Plan

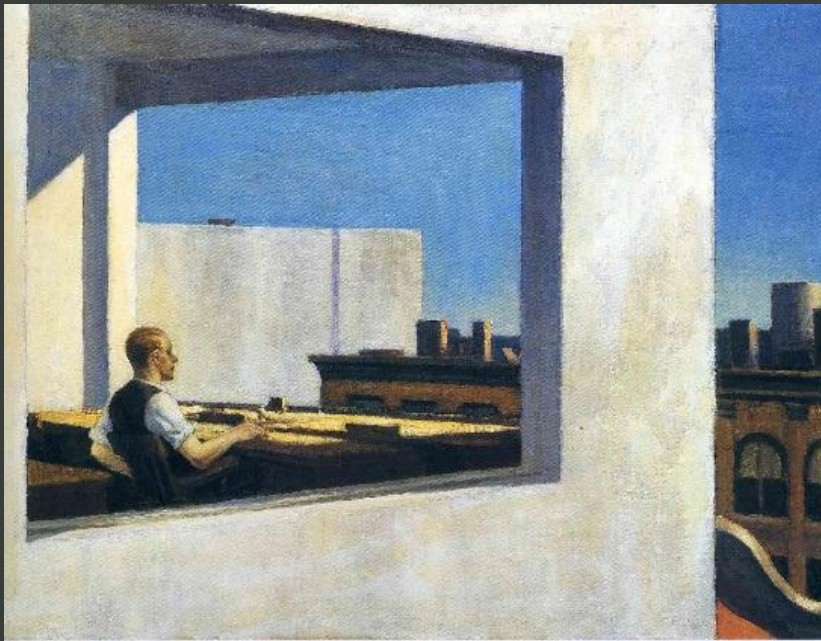
Source: Francis-Jones Morehen Thorp

## Future Proofing Universities





# Workplace Design History



Office in a small city, Edward Hopper 1951

Source: The New Office

Future Proofing Universities





# Workplace Design History



Taylorism

Source: toto.lib.UNCA.edu



Burolandschaft

Source: The New Office



Typical 1960 office

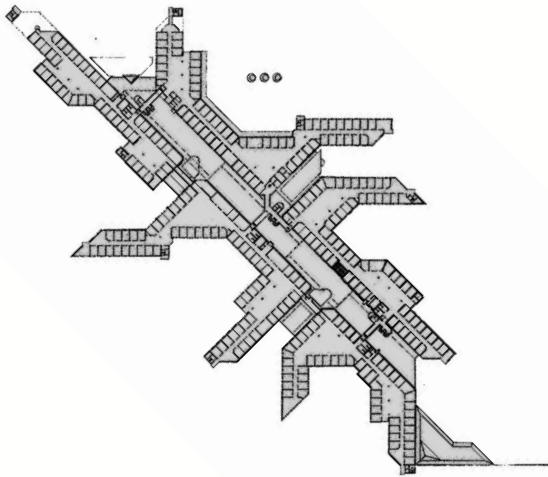
Source: The New Office



## Future Proofing Universities

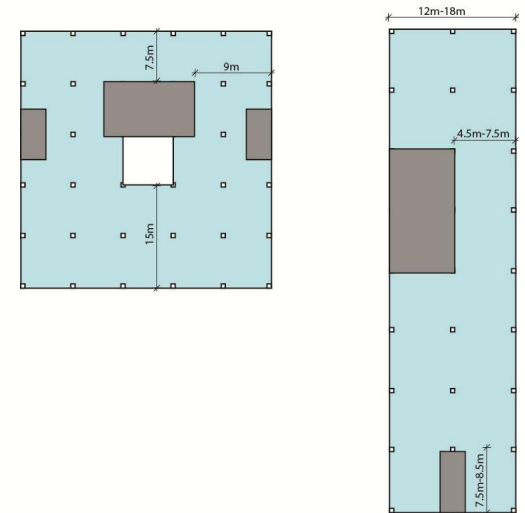


# Workplace Design History



SAS Headquarters, Sweden, 1988

Source: The New Office



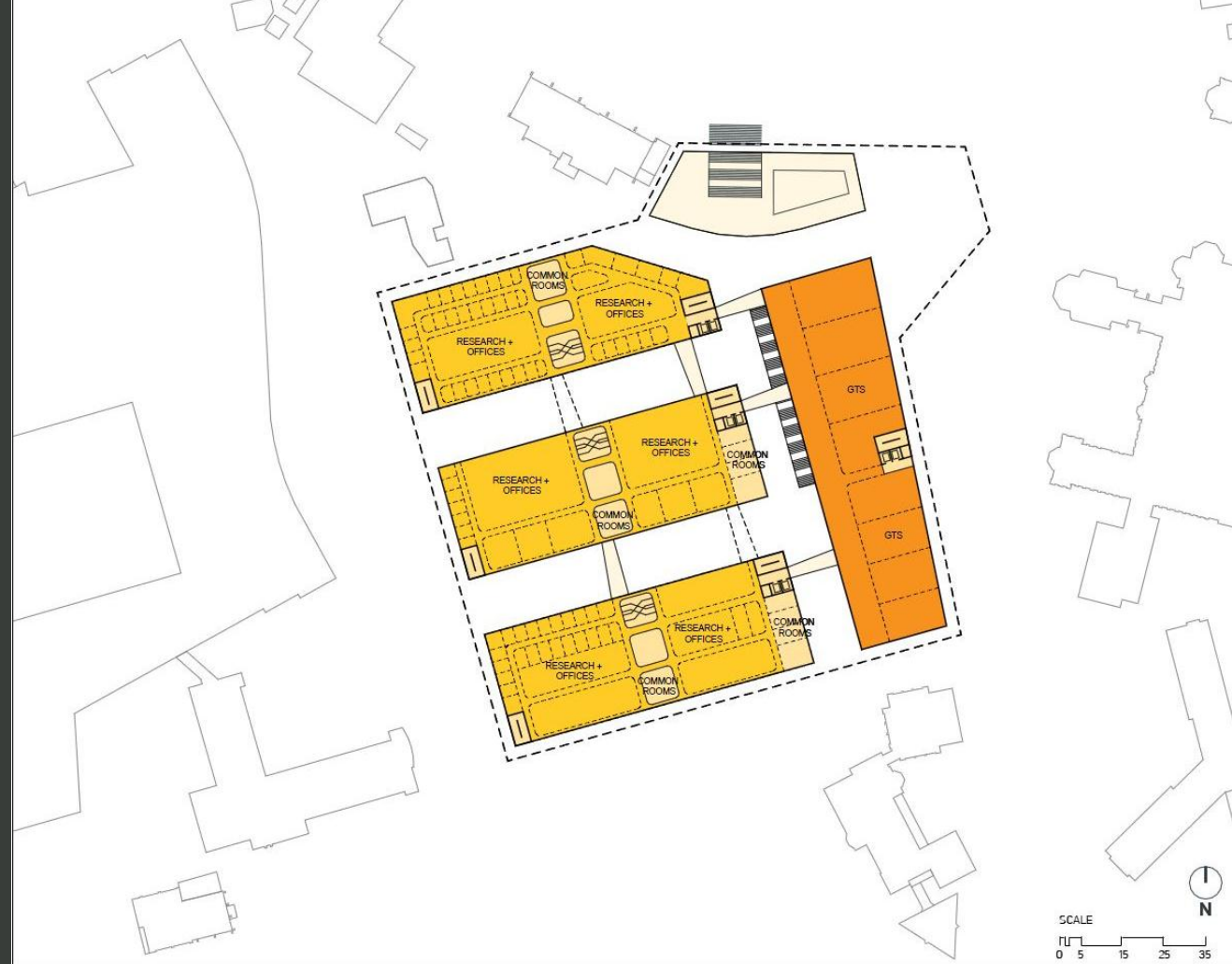
Generic Floor plates

Source: British Council for Offices, Specification



## Future Proofing Universities





University of Sydney, Blackburn Bosch Precinct Master Plan  
Source: Hames Sharley

# Workplace Design History

Future Proofing Universities



# Workplace Design History

|  | Conventional office assumptions   | New Ways of working  |
|--|---|--|
| Patterns of work   | Routine processes<br>Individual tasks<br>Isolated work  | Creative knowledge work<br>Groups, teams, projects<br>Interactive work   |
| Patterns of occupancy of space over time                               | Central office locations in which staff are assumed to occupy individually “owned” workstations on a full-time basis, typically over the course of the 9-5 day. The office assumes one desk per person; provides a hierarchy (planned or enclosed); and is occupied typically at levels at least 30% below full capacity. | Distributed set of work locations (which may be nomadic, mobile in the office or at home) linked by networks of communication in which autonomous individuals work in project teams. Daily timetable is extended and irregular. Multifunctional work settings are occupied on an as-needed basis. Daily occupancy of space near to capacity. |
| Type of space layout, furniture systems, and use of space and building | Hierarchy of space and furniture related to status. Individual allocation of space predominates over interactive meeting spaces.  | Multiple shared group work and individual task-based, setting, layout and furniture of the office geared to work process and its task.   |
| Use of information technology  | Technology used for routine data-processing, terminals in fixed positions served by mainframes.   | Focus on mobility of IT equipment used in a wide variety of settings. Technology used to support creative knowledge work, both individual and group, file servers serve a variety of IT tools, including PCs and laptops, and shared specialized equipment.  |

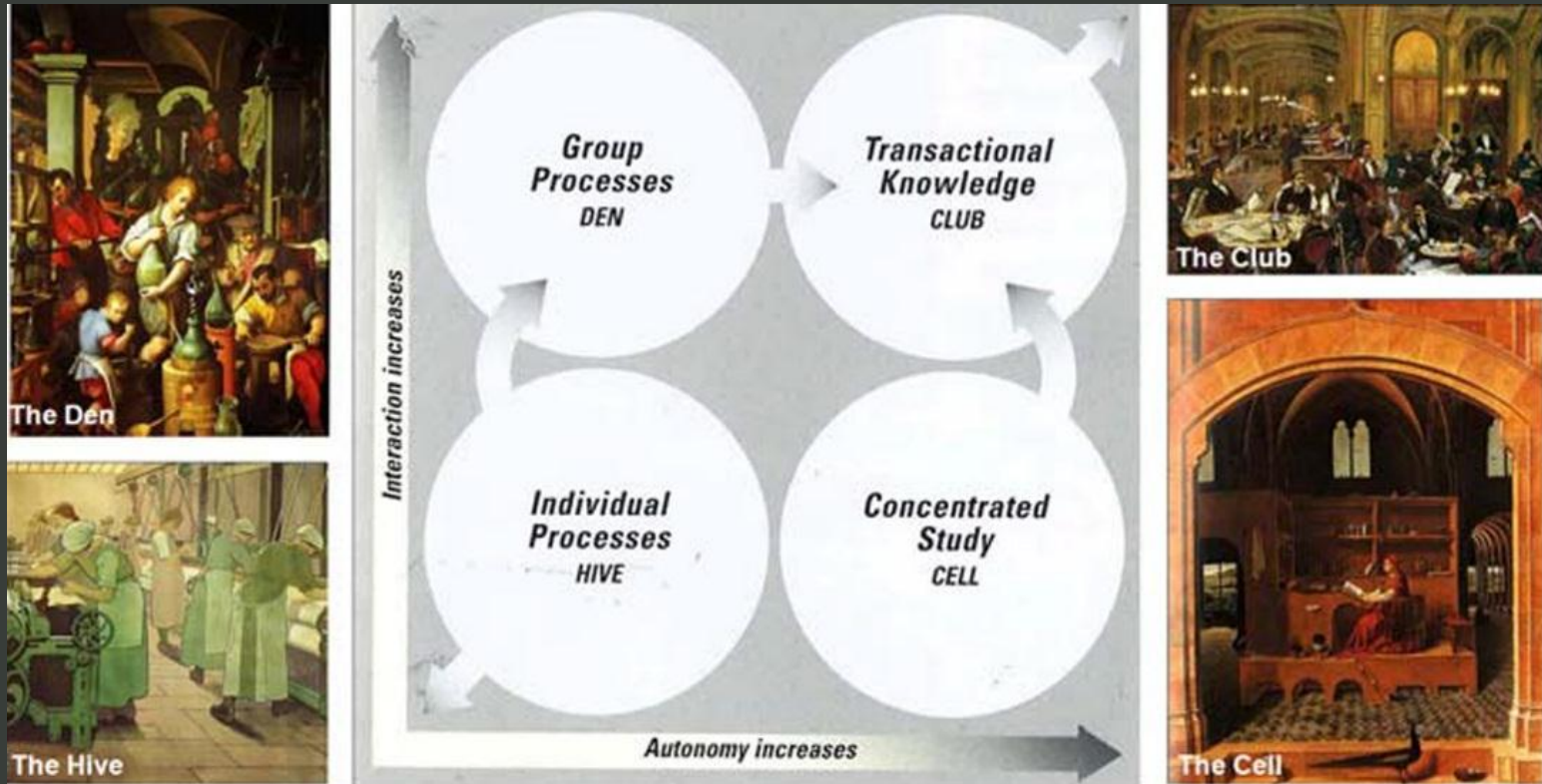
Source: The New Office

## Future Proofing Universities





# Workplace Design History

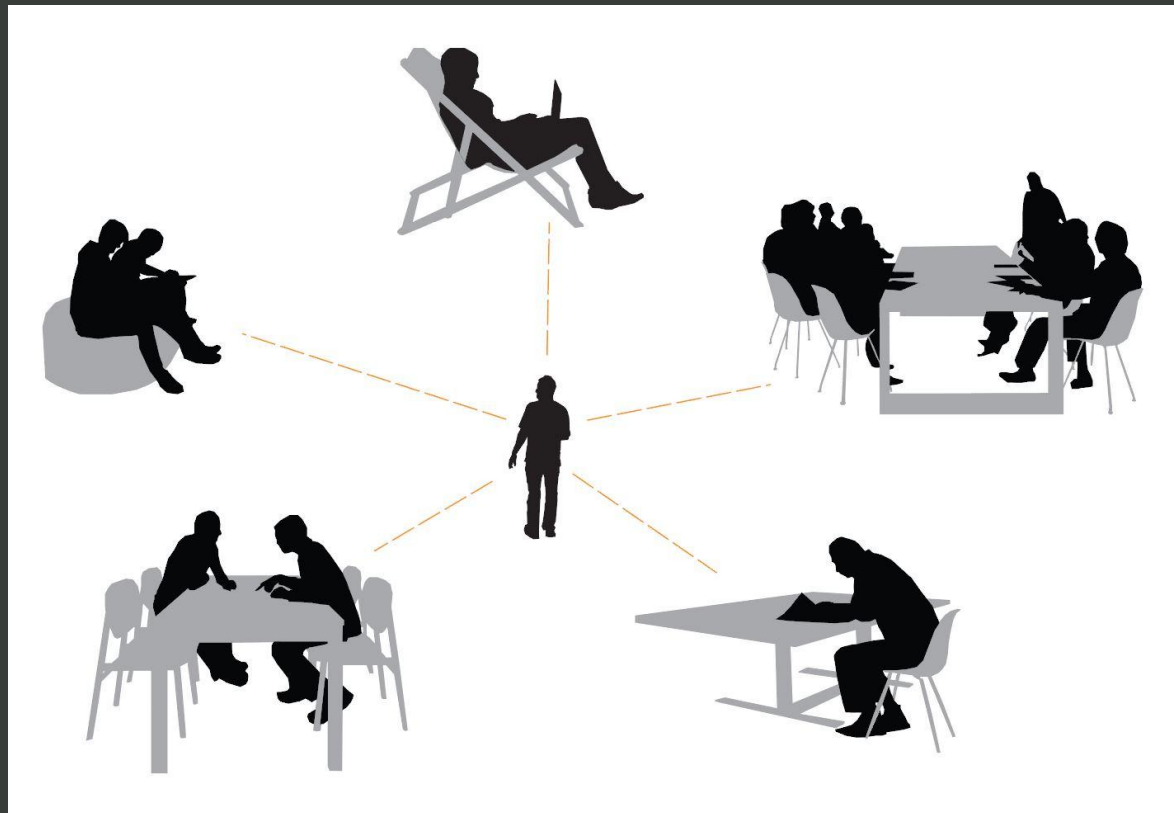


The Diagram Logic of the New Office  
Source: The New Office

Future Proofing Universities



# Workplace Design History



Future Proofing Universities

Source: Hassell





Giblin Eunson Library for University of Melbourne  
Source: Hassell

# Workplace Design History

Future Proofing Universities



# Future Proofing A-Z

- Master Plan
- Infrastructure
- Sustainability
- Resilient
- Scale
- Accessible
- Geometry
- Multi-use
- Demountable
- Circulation
- Floor plate
- Generic/Non-generic
- Structure
- Services
- Section
- Seven S's
- Soft space
- Modularisation
- Loose fit
- Data



Future Proofing Universities





# Master Plan

- Growth
- Sensitivity Analysis



UWA Campus Master Plan  
Source: Hames Sharley

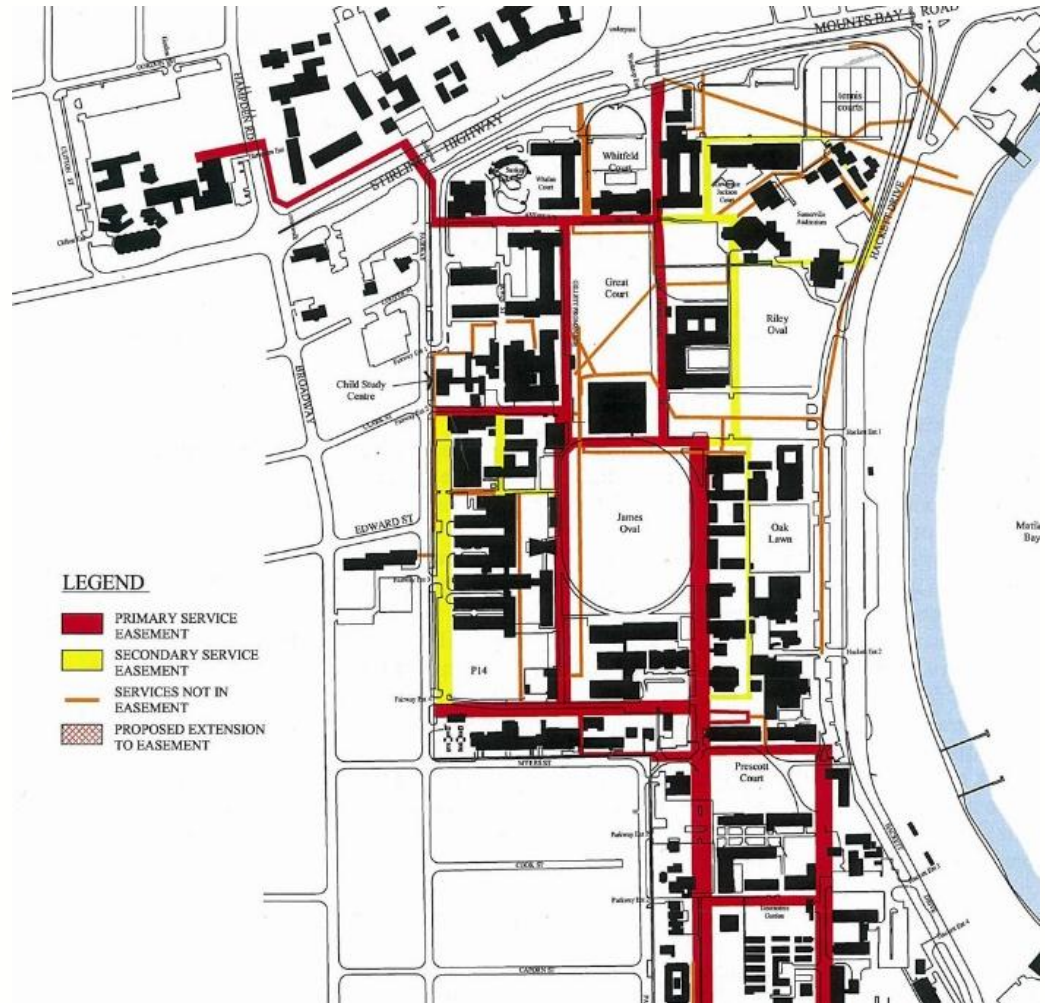


## Future Proofing Universities



# Infrastructure Plan

- Services



UWA Campus Master Plan  
Source: Hames Sharley

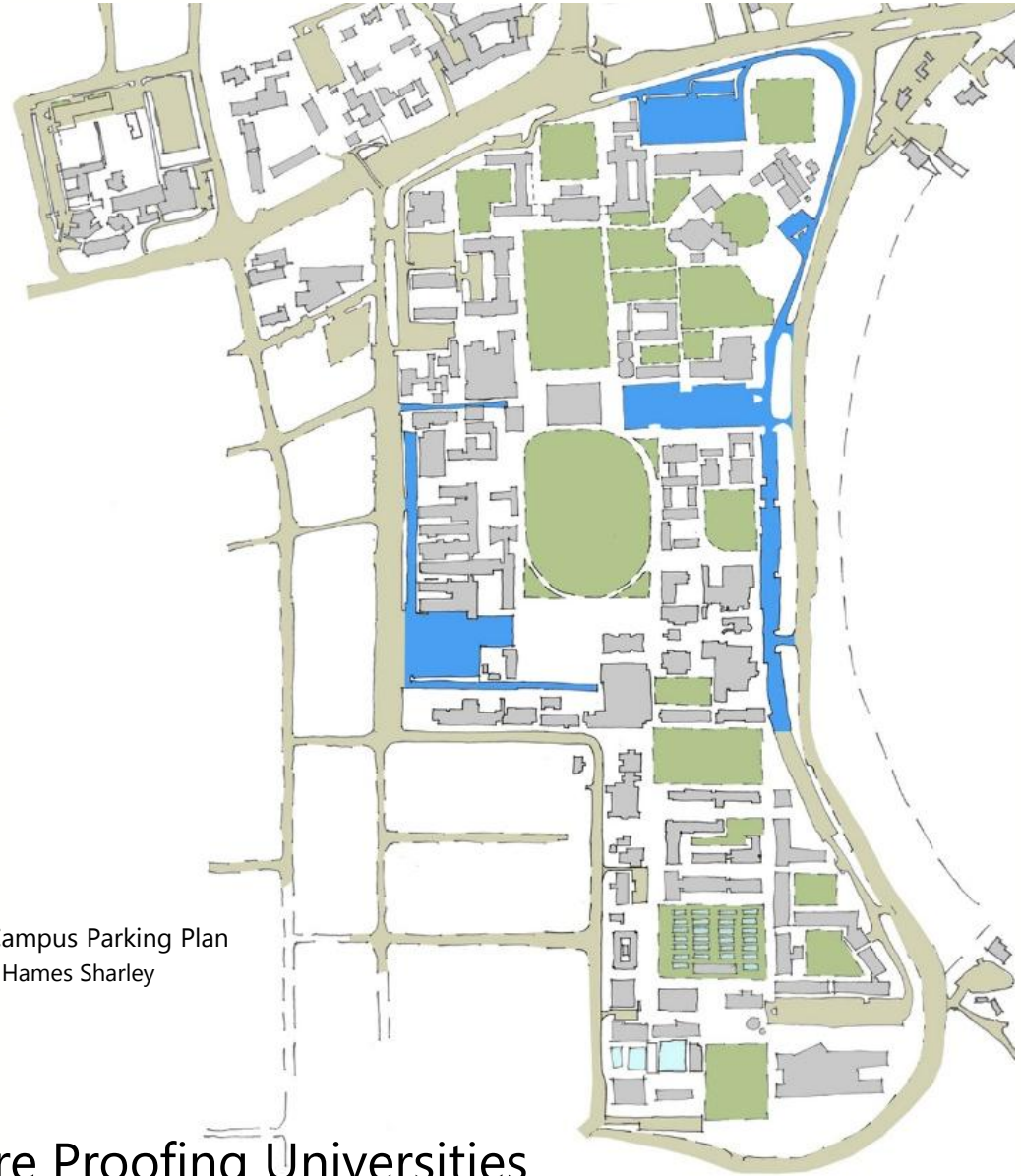


## Future Proofing Universities



# Infrastructure Plan

- Roads and Parking



UWA Campus Parking Plan  
Source: Hames Sharley



Future Proofing Universities

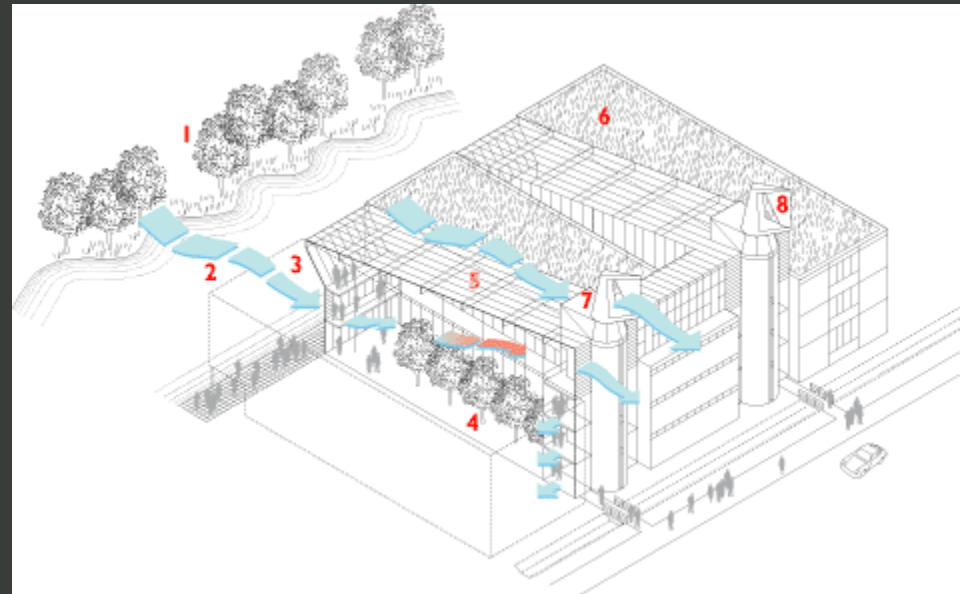




# Sustainability



University of Nottingham – Jubilee Campus  
Source: Hopkins Architects



Future Proofing Universities



# Resilient



University of Queensland, floods 2011

Source: GIS People

## Future Proofing Universities





# Scale

Appropriate



UTS Tower, Sydney  
Source: University of Technology Sydney



University of Canberra, Student Housing  
Source: Google Earth

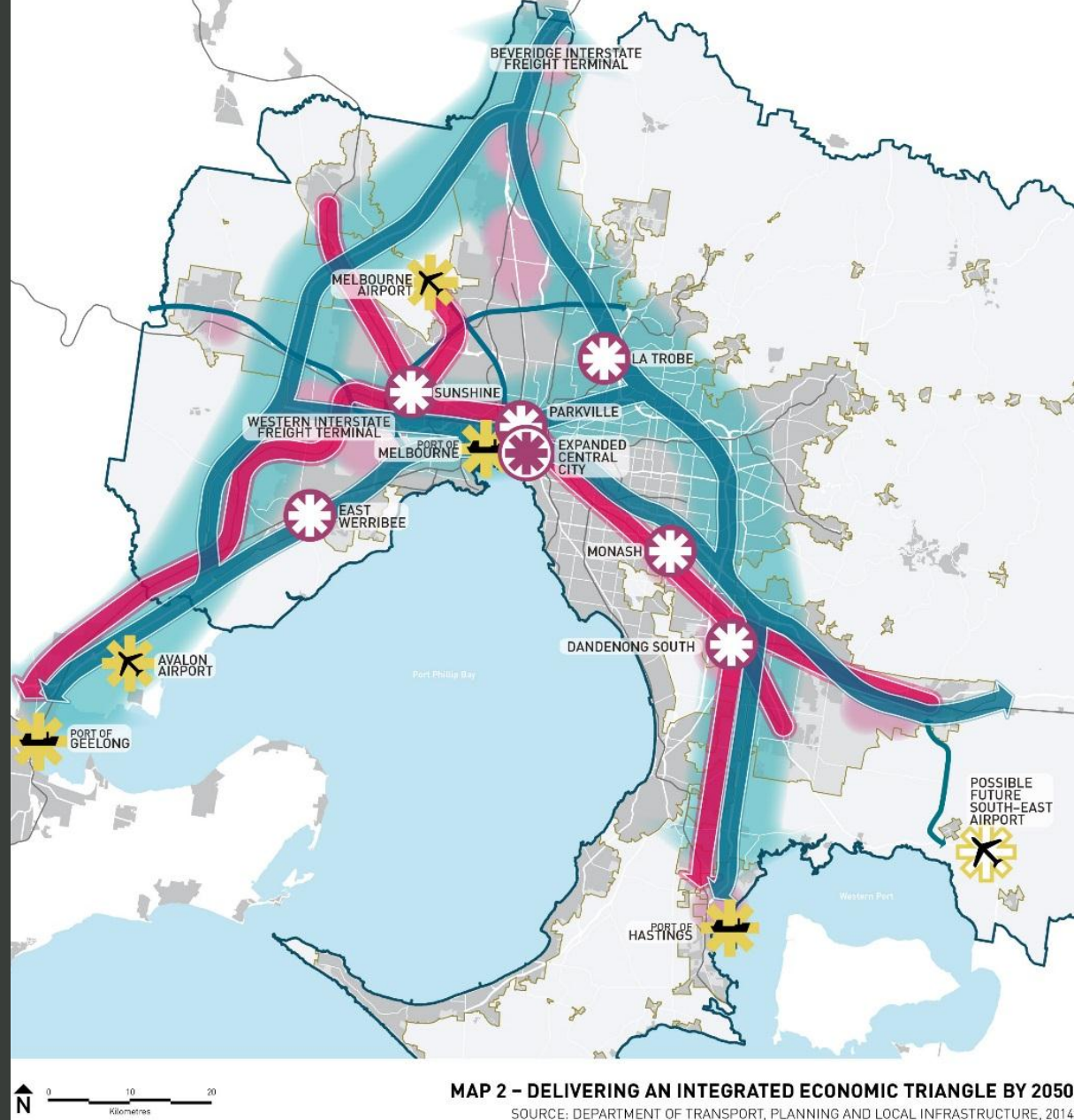
Future Proofing Universities





# Accessible

## Healthy



## Future Proofing Universities

Plan Melbourne 2014  
Source: State Government Victoria



# Geometry

Flexible  
Extendable



Hong Kong Polytechnic - Innovation Tower  
Source: World Architecture

Future Proofing Universities





Petronas University, Malaysia

Source: Foster and Partners



## Future Proofing Universities





# Multi-use, Demountable

Offices/housing



Edinburgh Townhouses

Source: Highlanderimages



Martini Hospital - Netherlands

Source: Seed Architects



Martini Hospital - Netherlands

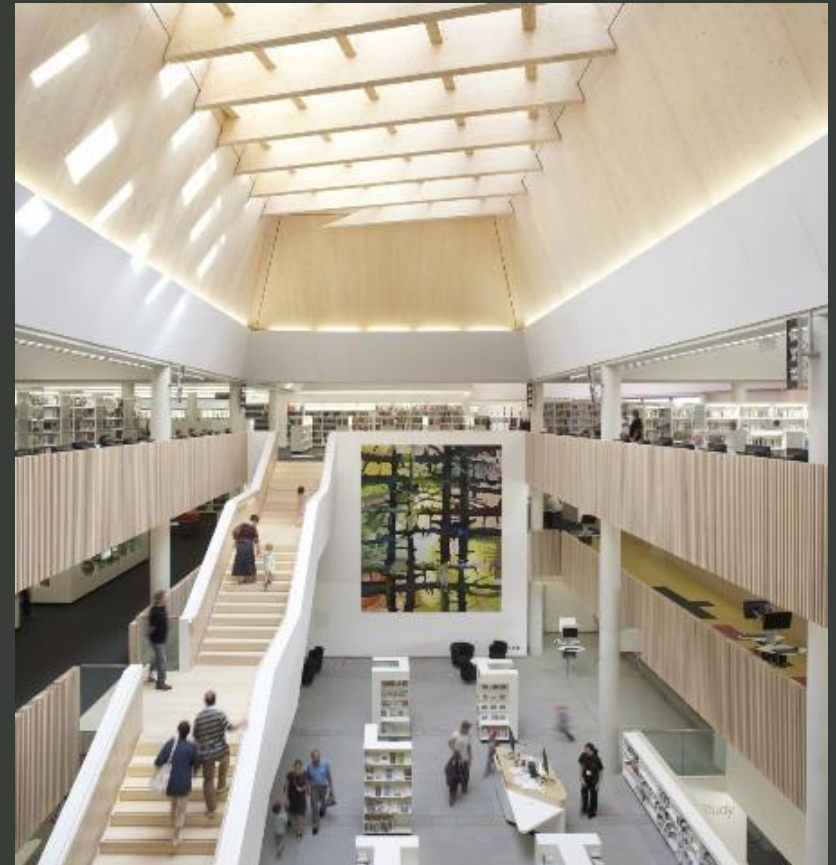
Source: StudioDvo

Future Proofing Universities



# Multi-use

Shared



Worcester Hive Library - University of Worcester, England  
Source: Fielden Clegg Bradley

Future Proofing Universities



# Circulation

- Visible
- Enjoyable



Manchester Metropolitan University, School of Art  
Source: Fielden Clegg Bradley

Future Proofing Universities





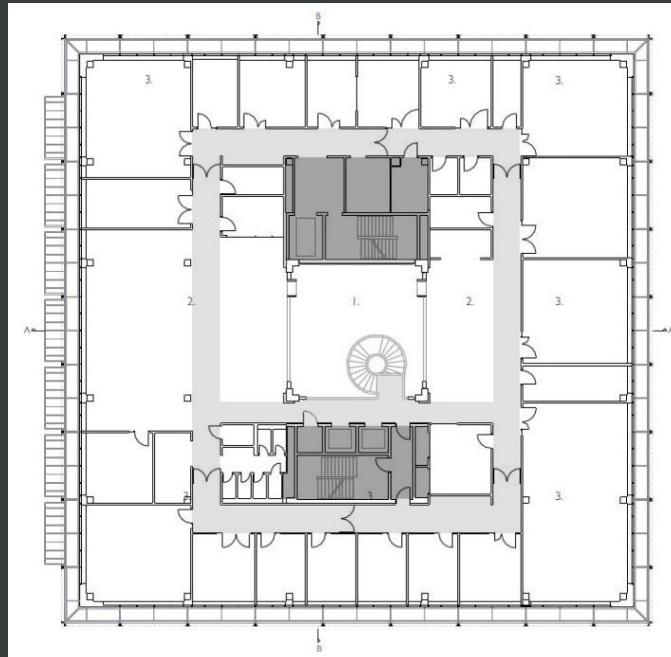
## Future Proofing Universities

Informatics Forum, University of Edinburgh  
Source: Bennetts Associates

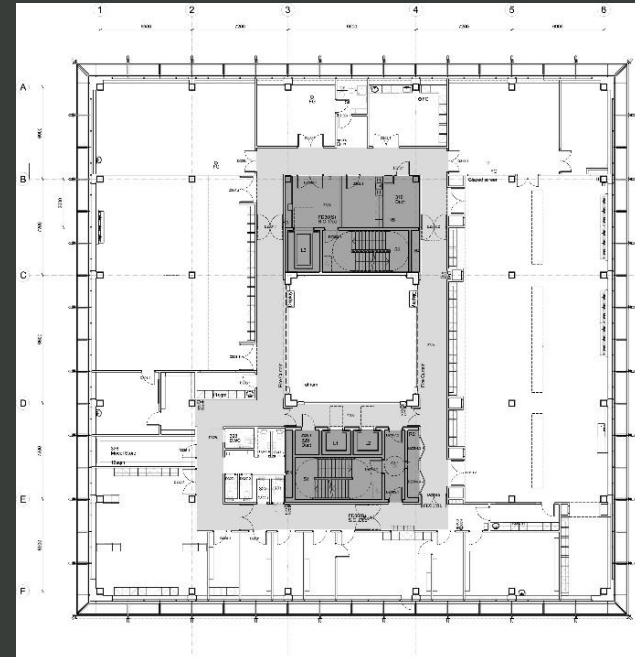


# Floor plate

- Adaptable
- Extendable
- Grid



First Floor



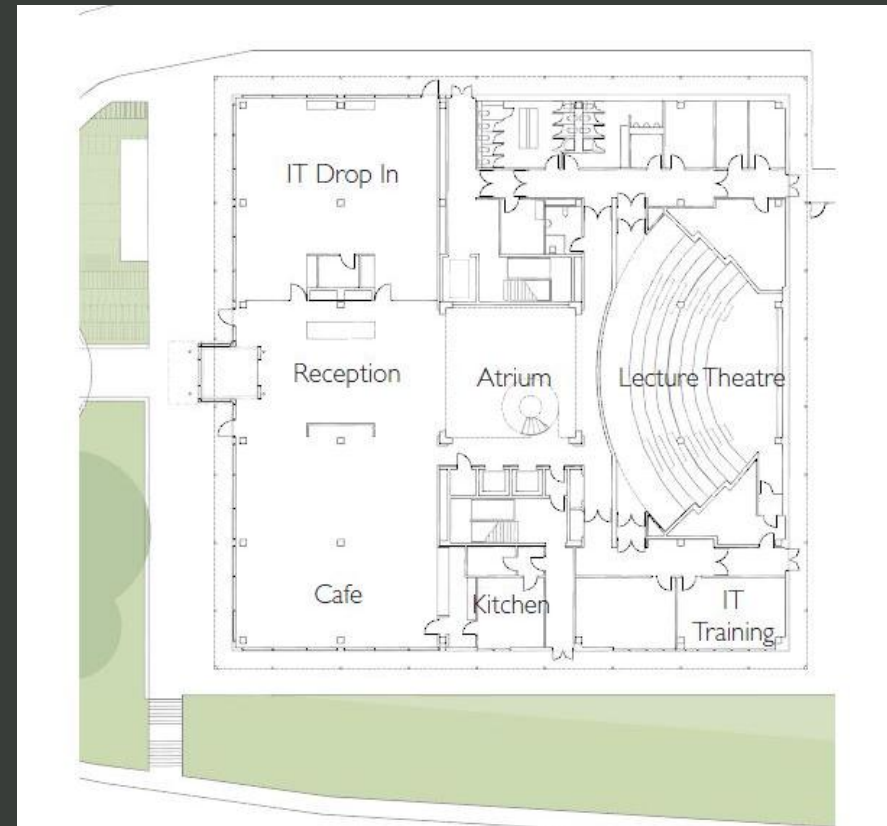
Third Floor

Suttie Centre, University of Aberdeen  
Source: Bennetts Associates

Future Proofing Universities



# Generic/Non generic



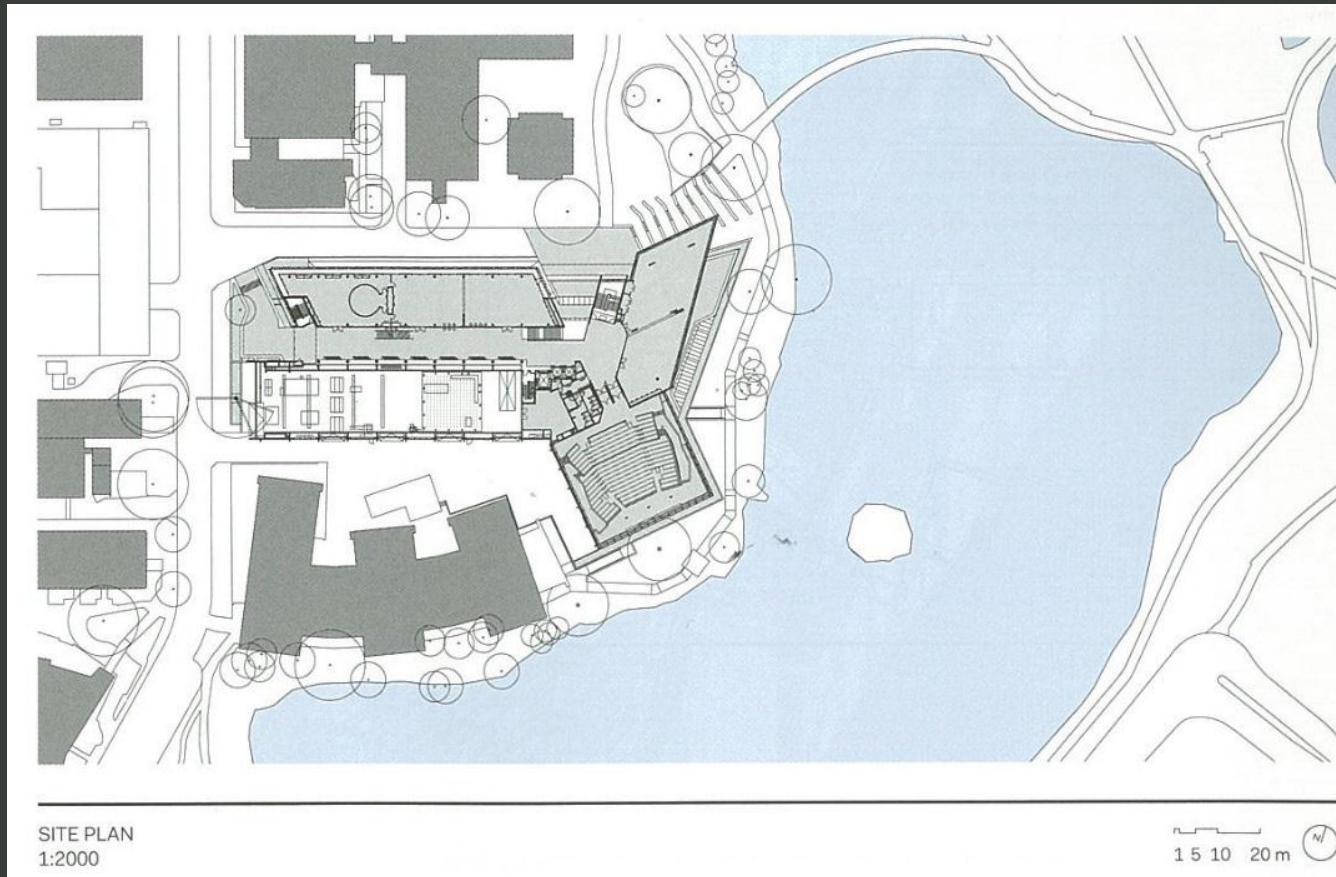
Ground Floor  
Suttie Centre, University of Aberdeen  
Source: Bennetts Associates

Future Proofing Universities





# Generic/Non generic



Future Proofing Universities



# Structure

- Spans
- Down stands
- Geometry
- Holing
- Loading
- Vibration



Frick Chemistry Laboratories – Princeton University  
Source: Hopkins Architects

Future Proofing Universities



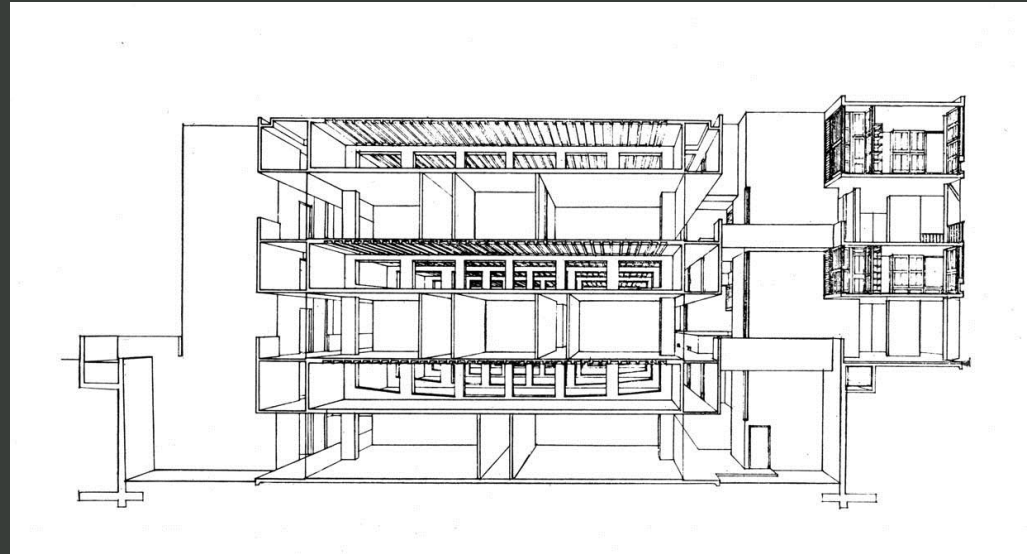


# Services

- Adaptability
- Maintenance
- Access
- Infrastructure
- Core Placement

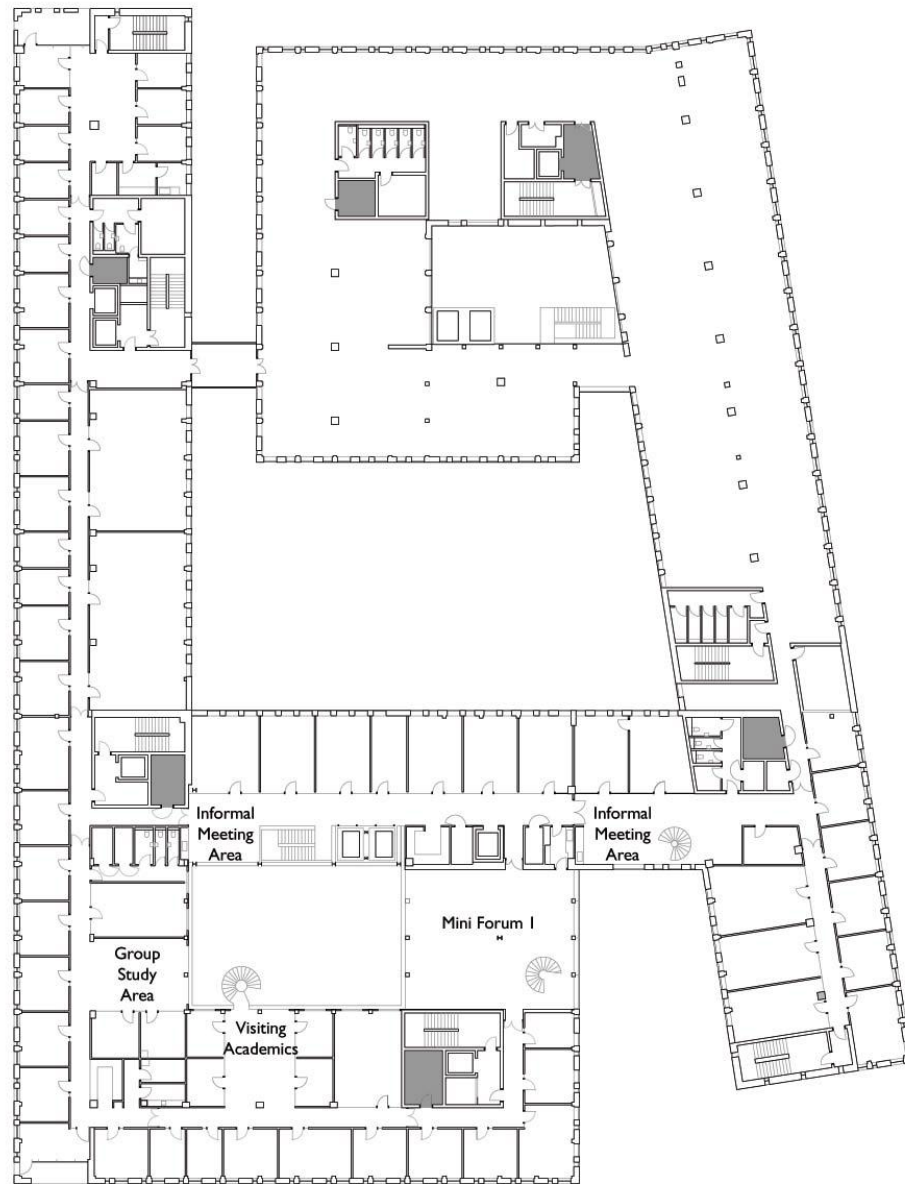


Frick Chemistry Laboratories – Princeton University  
Source: Hopkins Architects



Salk Institute, Louis Kahn  
Source: Architangent via Oxford Art Online

Future Proofing Universities



Potterrow Informatics Forum, Edinburgh  
Source: Bennetts Associates



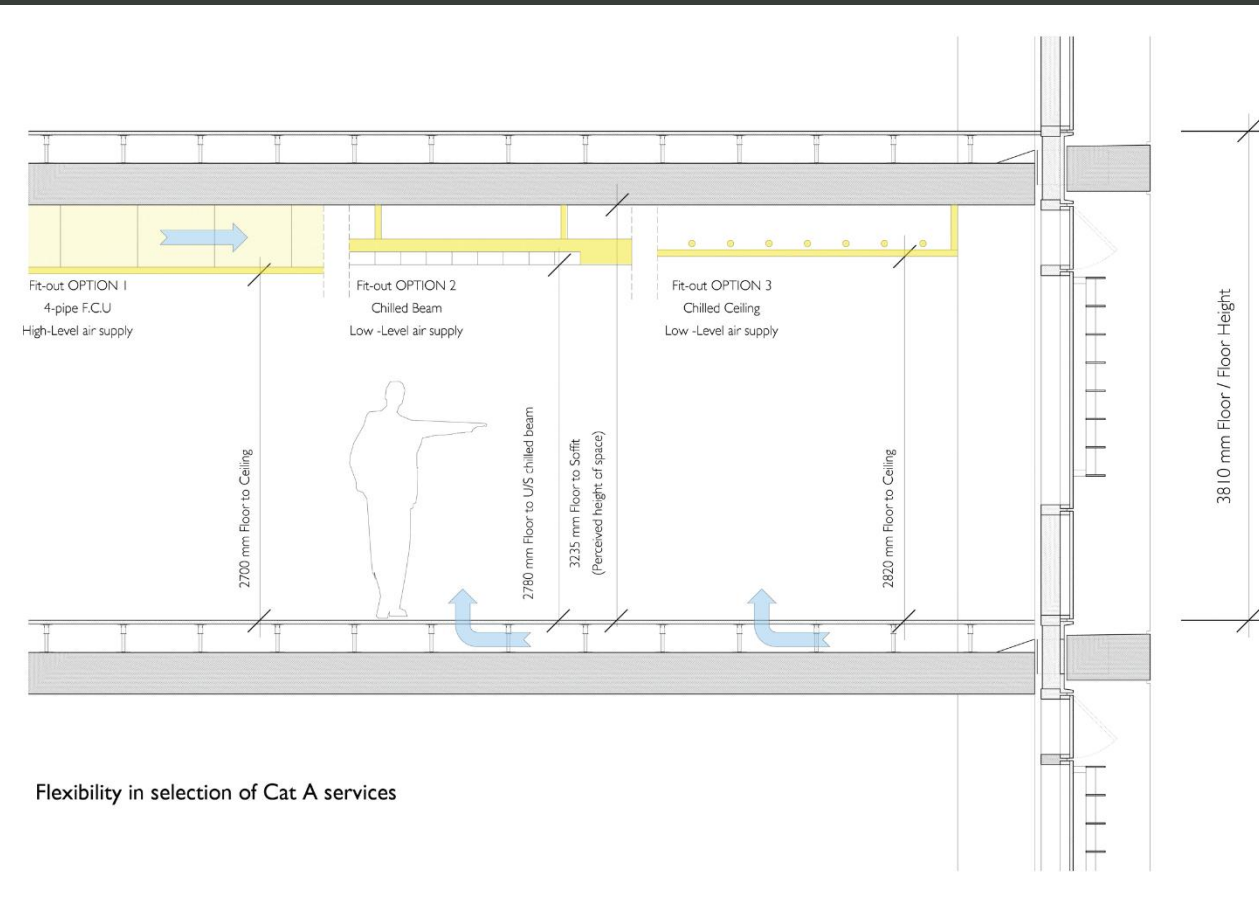
## Future Proofing Universities





# Section

- Adaptable



New Street Square, London

Source: Bennetts Associates

## Future Proofing Universities



# Seven S's

|            |               |
|------------|---------------|
| Site       | Eternal       |
| Structure  | 50 – 75 years |
| Skin       | 25 years      |
| Services   | 12 – 15 years |
| Scenery    | 7 – 8 years   |
| Space Plan | 3 years       |
| Settings   | day-to-day    |



Informatics Forum, University of Edinburgh  
Source: Bennetts Associates

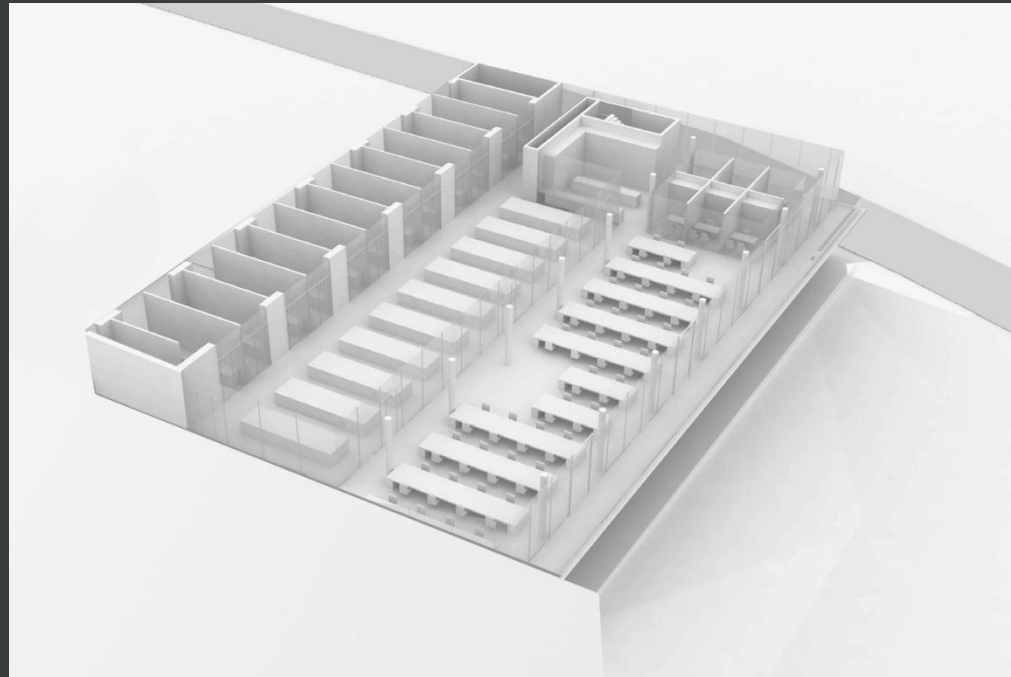
Future Proofing Universities





# Soft Space

- Alterable
- Services to allow upgrading



Generic Laboratory Study  
Source: Hassell



## Future Proofing Universities



# Modularisation

- Mobile Cabinetry
- More Storage
- Multiple Functions
- Adaptable



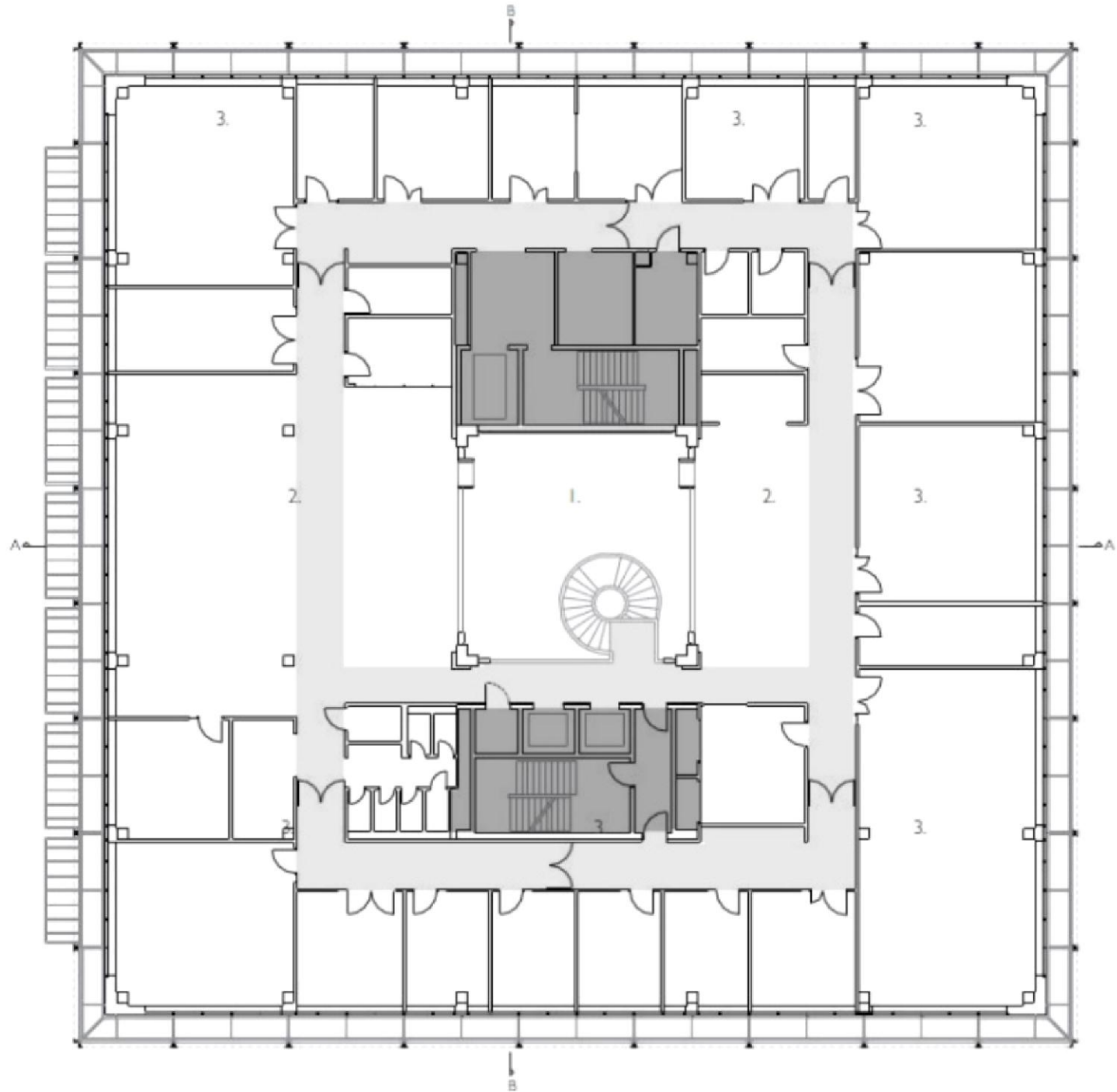
Harry Perkins Institute of Medical Research (North), 2014  
Source: Hames Sharley

Future Proofing Universities



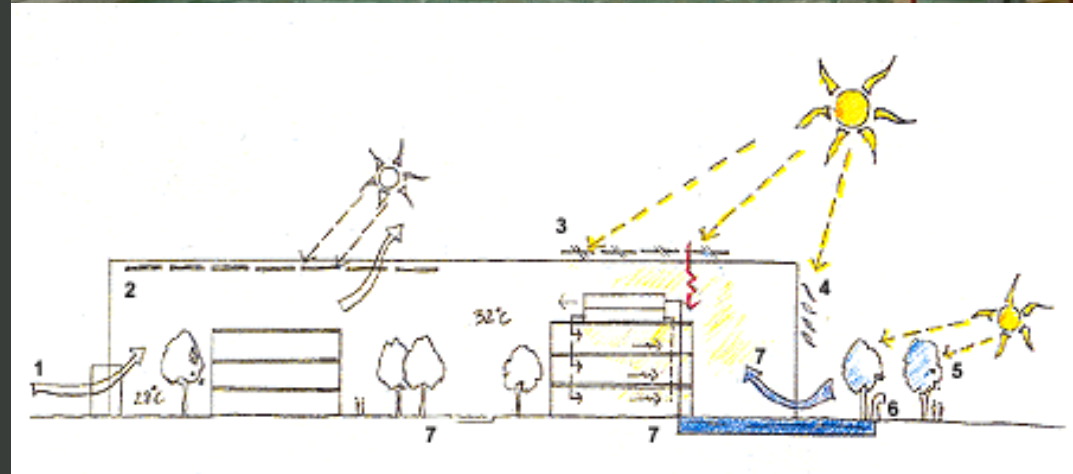
James H. Clark Building, Stanford University  
Source: Hames Sharley







# Loose Fit

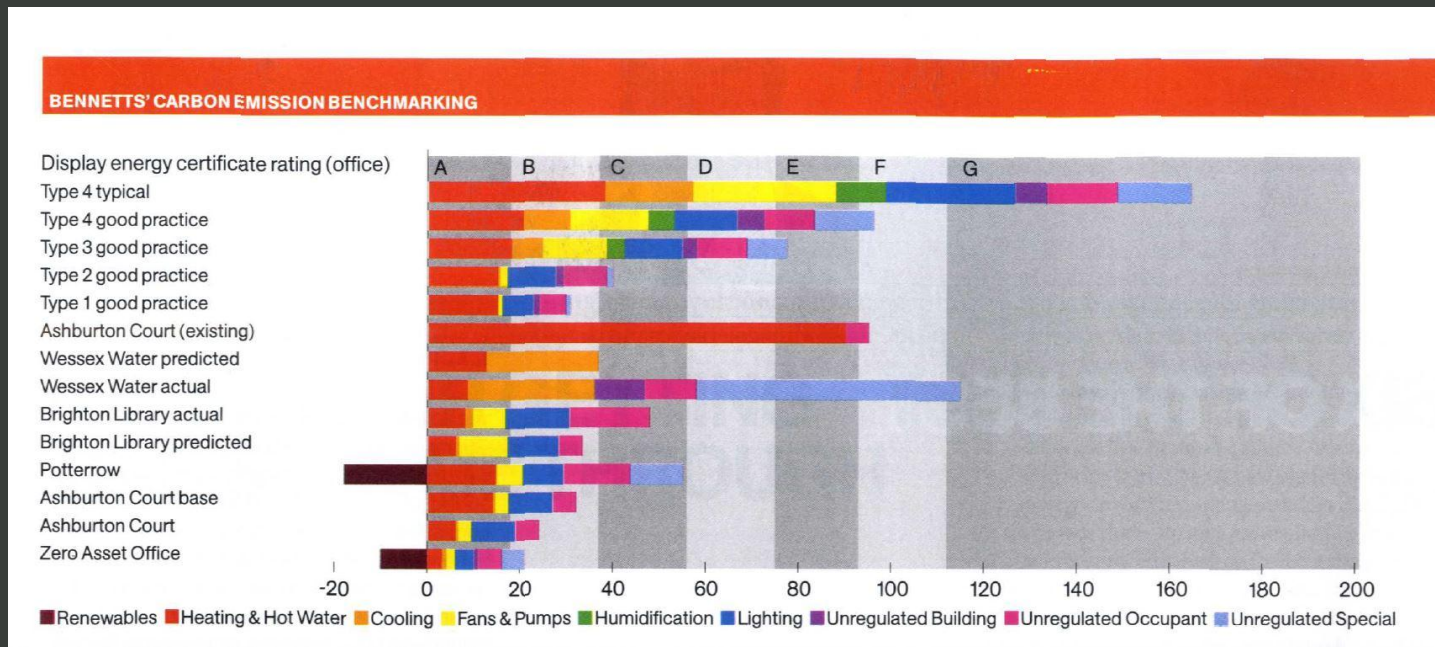


Academie de Mont Cenis  
Source: Jourda et Perraudin

Future Proofing Universities



# Data



Post Occupancy Evaluation, Bennetts Associates

Source: RIBA Journal, May 2009

Future Proofing Universities





# Data

Manchester Metropolitan University  
Source: Sustainability KPI Dashboard 2011-2012

let's make a  
sustainable  
planet

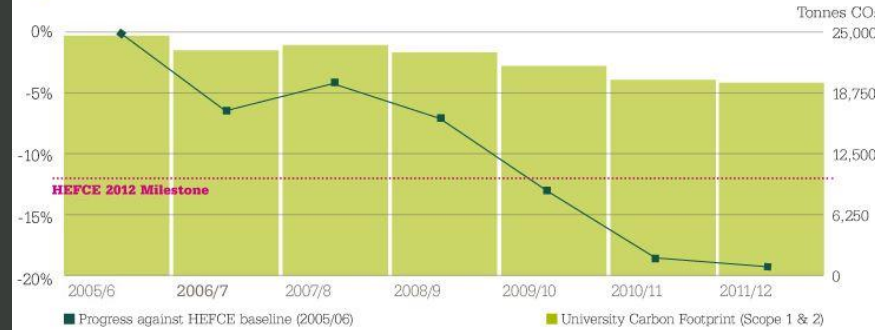


## Sustainability KPI Dashboard 2011-2012

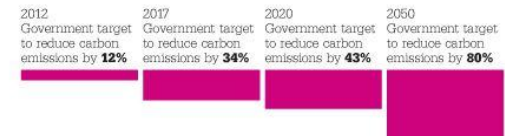
### The University



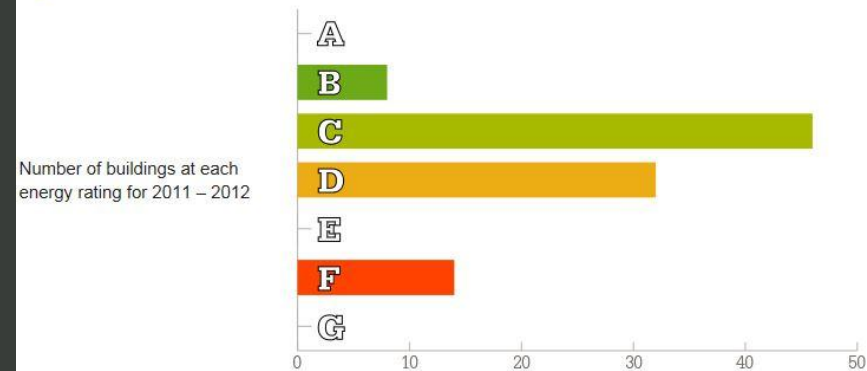
#### Our Carbon Footprint



#### HEFCE milestones

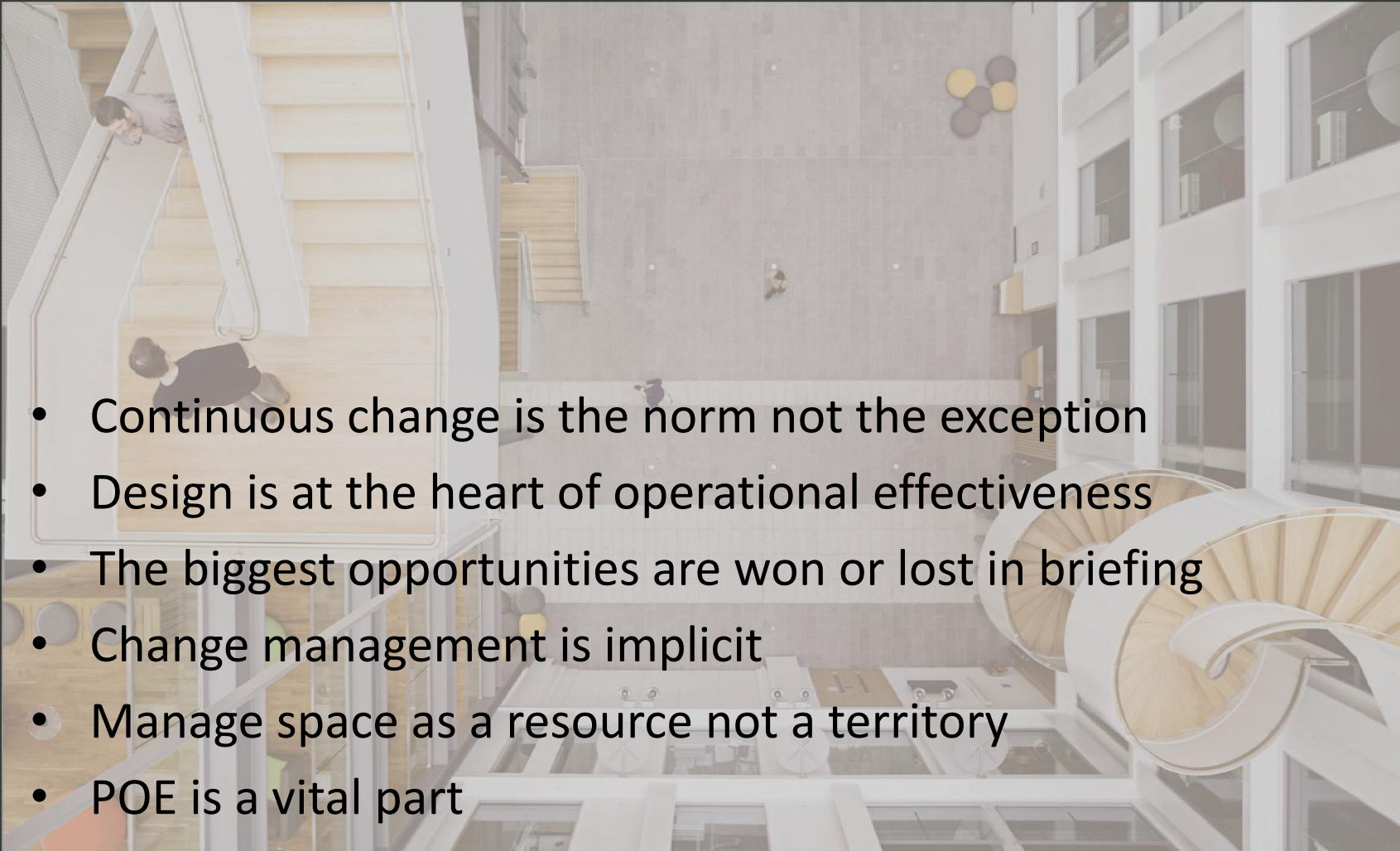


#### Our Building Energy & Environmental Efficiency



# Future Proofing Universities



- 
- Continuous change is the norm not the exception
  - Design is at the heart of operational effectiveness
  - The biggest opportunities are won or lost in briefing
  - Change management is implicit
  - Manage space as a resource not a territory
  - POE is a vital part

Future Proofing Universities

Hames  
SHARLEY

[www.hamessharley.com.au](http://www.hamessharley.com.au)

ARCHITECTURE | INTERIORS | URBAN DESIGN | PLANNING | LANDSCAPE

