

# EMEARC18

OCLC EMEA  
REGIONAL COUNCIL  
MEETING

Hello.

I'm the **Smarter** Library.



# Re-Imagining the University Library

JANETTE WRIGHT, UNITED ARAB EMIRATES UNIVERSITY



**Janette Wright**  
Dean of Libraries, UAEU

# E. Smart Spaces

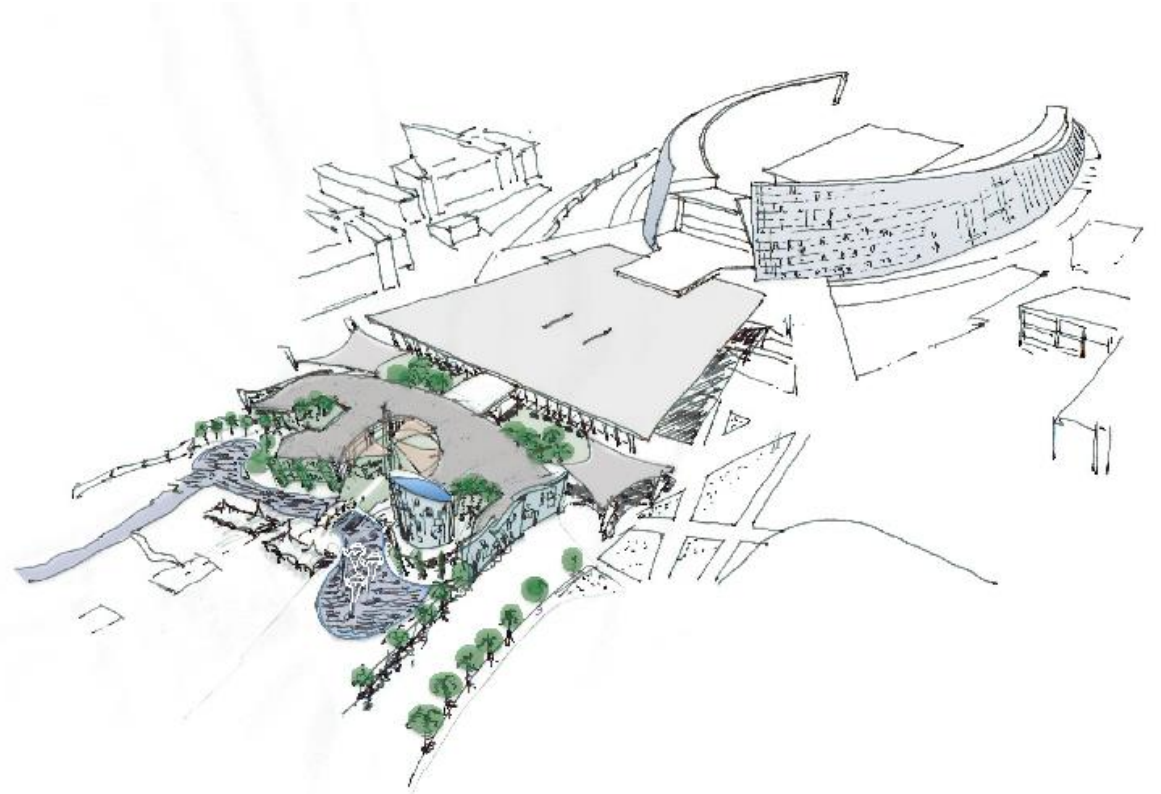
# UAEU Libraries

- Context
- Vision
- Progress to date
- Barriers and Lessons

- Al Ain 16,000 students  
1000 faculty  
segregated campus
- Year of Reading
- Drivers for change
- Dean's background
- Cultural factors



- Space as a change agent
- Activation & Engagement
- Measures of success
- Role of technology and innovation



INNOVATIVE  
STIMULATING  
CREATIVE  
WELCOMIN  
HEALTHY  
DESIG  
GREEN  
IMAG  
ACCESSIBLE  
VISIBLE  
ARTISTIC  
ADAPTABLE  
COMFORTABLE  
INNOVATIVE  
TECHNOLOGIES  
YOU  
COLLABORATIVE  
WELL  
SERVICED  
SAID  
CROSS DISCIPLINERY

LEADING EDGE: AN EXAMPLAR

aurecon  
*bringing ideas  
to life*



- Consultation
- Design Concepts – exemplar for wellness & sustainability
- Design Brief
- Budgets, timelines

## UAEU research project encourages healthy eating

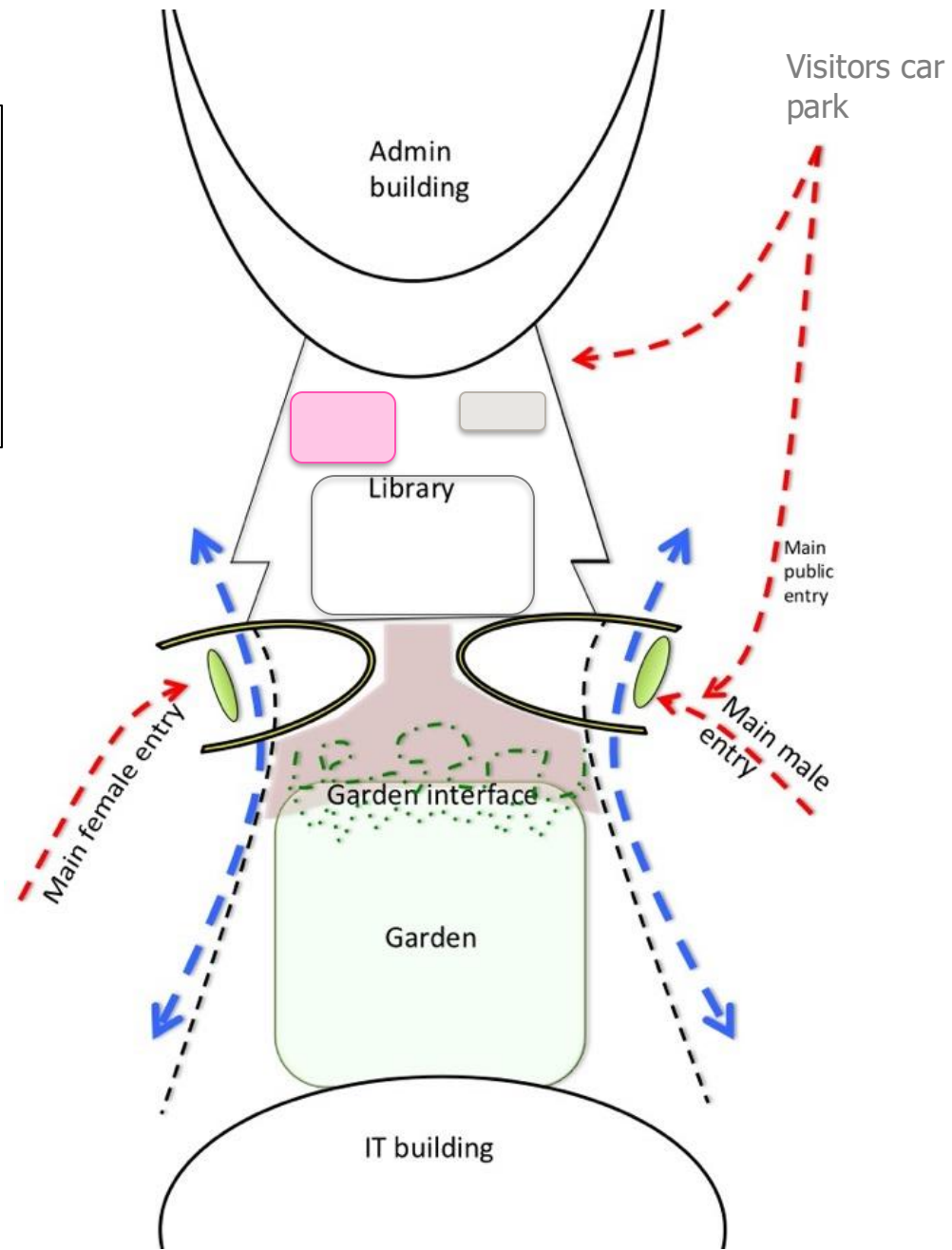
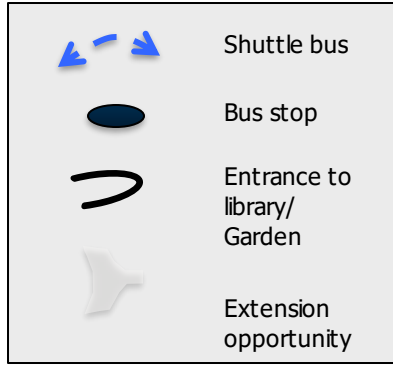
By Wam

Published Monday, August 07, 2017



Research led by United Arab Emirates University, UAEU, has produced new insights into how traditional Emirati foods affect blood sugar levels, with the aim of helping to encourage healthy eating and provide dietary guidance.

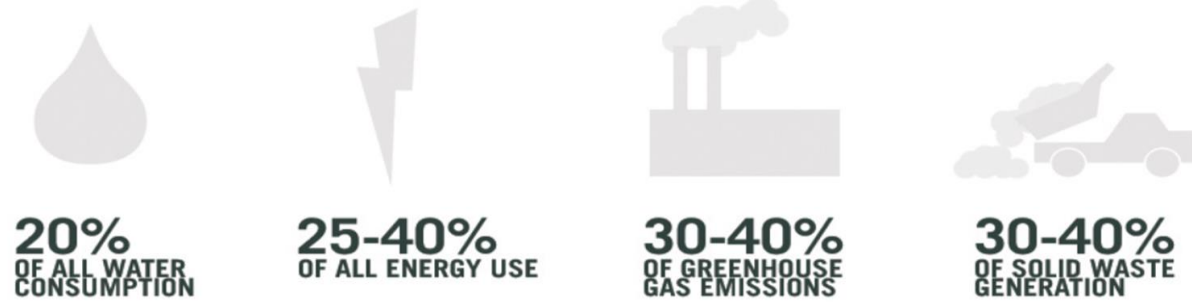






# Using the new UAEU Library as an exemplar: Best Practice Sustainable Building Design

## Global Impact of Buildings on the Environment



## Opportunities to Embed Sustainability in the design



UAEU Library will be a Living Lab for Sustainable Design

Demonstrate Innovation & best practice passive & low energy and water use

Teach students about practical sustainability

Use for research for Engineering, Architecture, Agriculture, Psychology, Health etc



The new entry experience

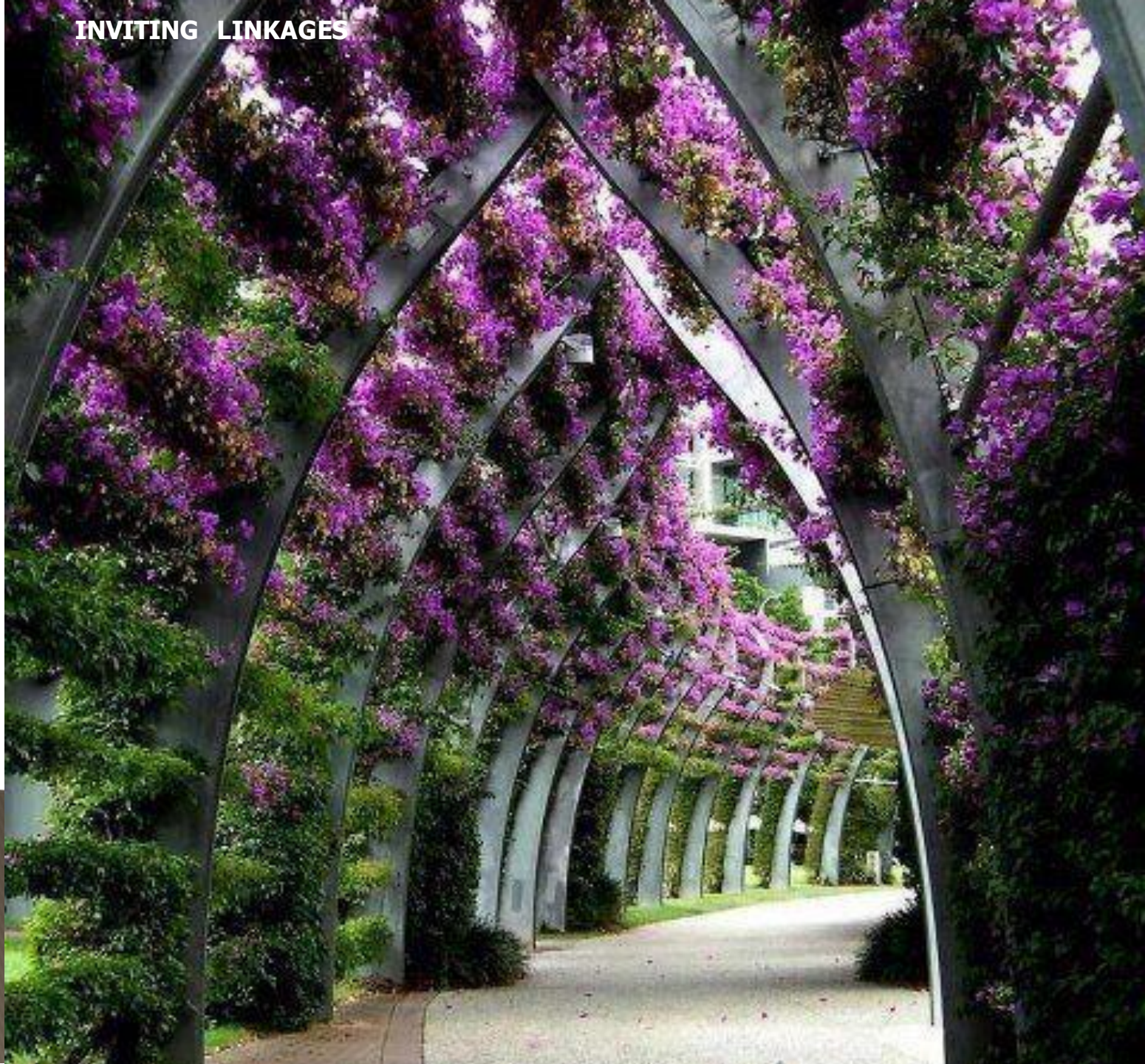
**aurecon**

**AXOS**  
URBAN

BRINGING OUTDOOR INDOOR



INVITING LINKAGES



## ARTISTIC SHADING



# NY Public Library in Bryant Park





GREEN DESIGN





New technology enables sustainable resource usage and gives users control over their working environment

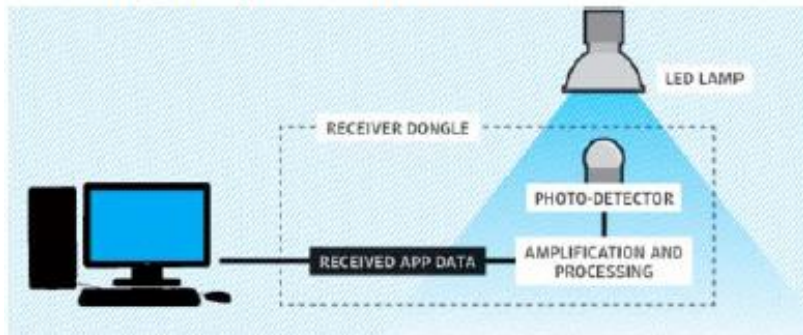
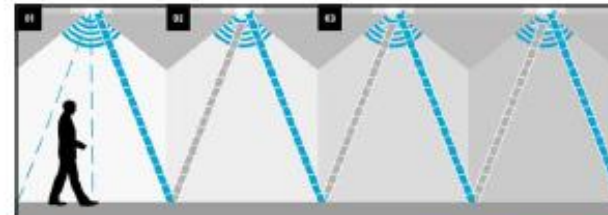
## Smart Lighting

Lighting fixtures becoming multi-function

- Distributed intelligence
- Sensor integration (temp, RH, light, occupancy)
- Circadian lighting to match moods
- Individual control using smart phone
- High speed internet



Organic Response Lighting

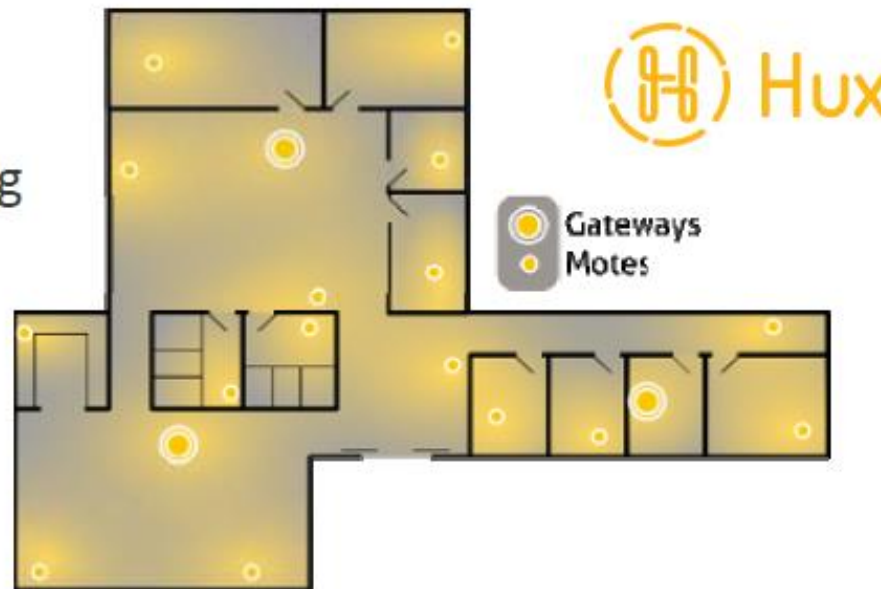
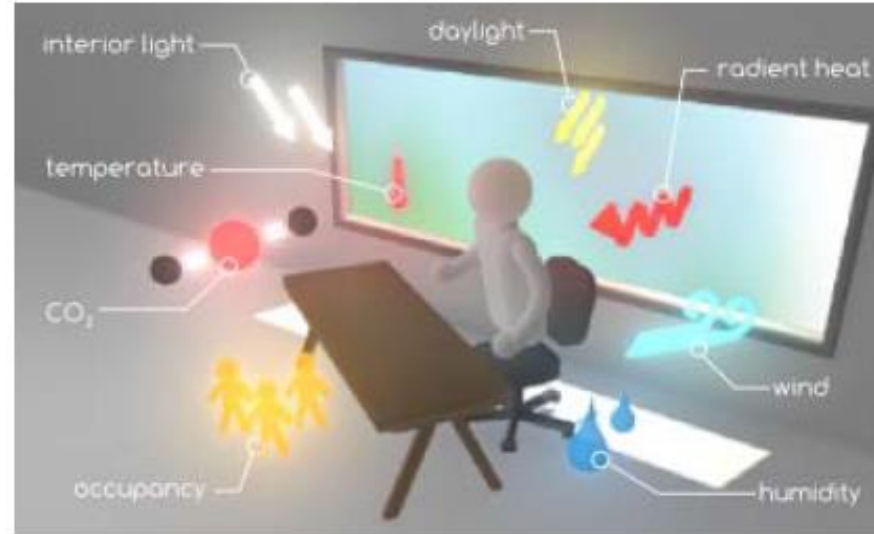


New technology enables sustainable resource usage and gives users control over their working environment

## Distributed Sensors

Detailed monitoring and analysis at the workstation

- Lux levels, radiant temperature, RH, air temp, occupancy, CO2
- Sensors can be easily relocated
- Low cost, simple monitoring systems





# Using the new library as an exemplar - Healthy Wellbeing & Happiness

**UAEU opens the Emirates Center for  
Happiness Research, the first of its kind  
in the UAE and the Middle East**

Sun, 26 March 2017



We spend 90% of our time indoors

Our built environment has a profound  
impact on our health, well-being,  
happiness and productivity

Design the New UAEU Library as an  
exemplar for Best Practice WELL building  
supported by the latest research



AIR



WATER



NOURISHMENT



LIGHT



FITNESS



COMFORT



MIND



# Demonstration Kitchen with the College of Food and Agriculture

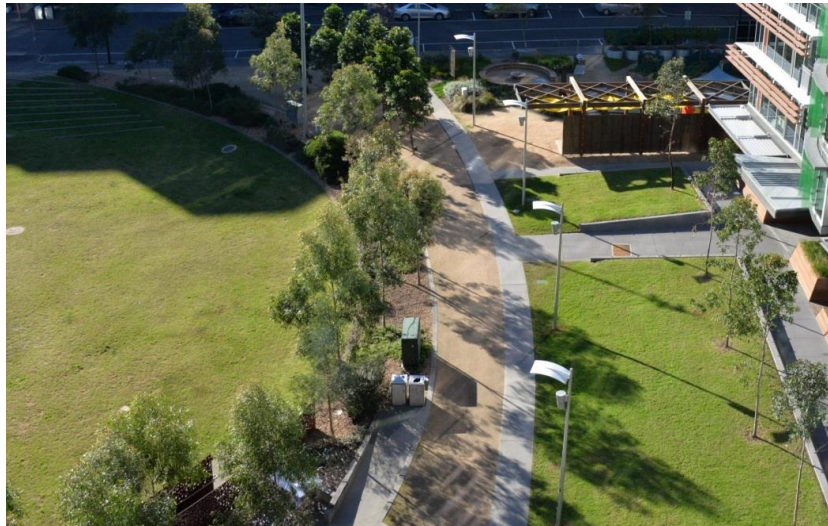




# Kitchen Gardens at Medibank Melbourne



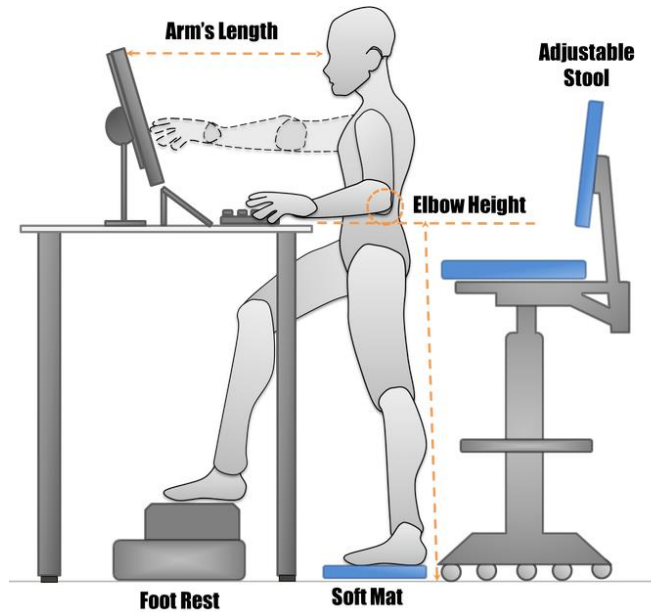
# Community Gardens and BBQ areas



## Stay Healthy and Hydrated with Bottle Filling Stations



## Sit to Stand Desks for Healthy Study



### 9 Ways Excessive Sitting Can Harm You.

**HEAD**

Sitting for long periods of time can cause blood clots to form which can travel to the brain causing a stroke.

**LUNGS**

You are twice as likely to develop a pulmonary embolism, or blood clot, if you sit most of your day.

**ARMS**

The reduction of physical activity leads to hypertension or high blood pressure.

**STOMACH**

Excessive sitting contributes to obesity & colon cancer. Enzymes in the blood vessels of muscles responsible for burning fat shut down leading to the disruption of the body's method of metabolizing fuels.

**FEET**

Numbness in the feet can be caused by poor circulation. It can also cause nerve damage or pressure on nerves when you sit for long periods.

**NECK**

Fluid retained in the legs during the day moves to the neck at night & contributes to sleep apnea. Neck Muscles are stressed leading to pain.

**HEART**

People who live a sedentary lifestyle are up to twice as likely to die or develop diabetes and heart disease than those who move frequently.

**LEGS**

Fluid collects in the legs during sitting. Standing & walking helps pump it through your body.

**BACK**

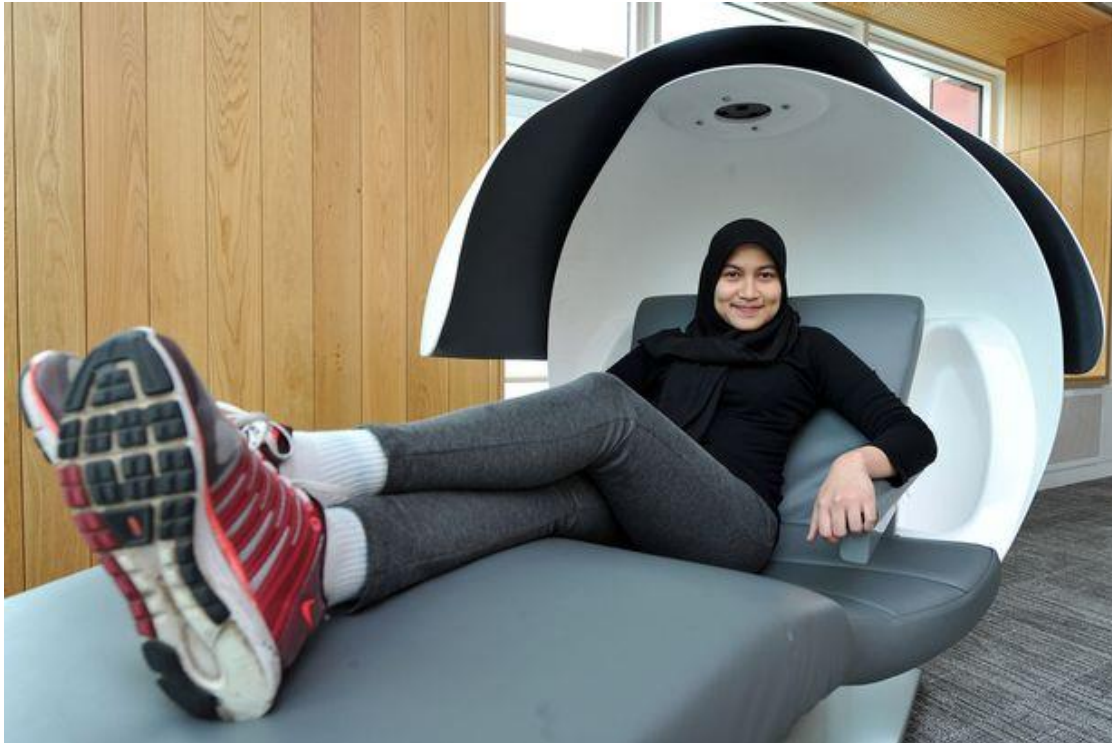
Sitting for long periods of time place a high amount on the spine. Over time, sitting can result in compression of the spinal disks. Because muscles are tight from pressure, sudden movements can lead to injury.





# UAEU

## Sleeping Pods at University of Western Sydney





# Examples of different study and collaboration settings



Australian Catholic  
University  
Melbourne Campus



# Examples of different study and collaboration settings



Australian Catholic  
University  
Melbourne Campus



# Examples of different study and collaboration settings



Australian Catholic  
University  
Melbourne Campus



# Examples of different study and collaboration settings



Australian Catholic  
University  
Melbourne campus

# Examples of different study and collaboration settings

University of Adelaide  
Student Hub



# Examples of different study and collaboration settings



Victoria University of Wellington Library

# Examples of flexible help desks



University of  
Adelaide  
Student Hub



# Example of food service



Australian Catholic  
University  
Melbourne Cafe

# The Gallery at the Library by the Dock

**UAEU**



# Examples of seating and shelving



# Providing Daylight and Views for the occupants





# Providing Daylight and Views for the occupants



The University of Wollongong



# University of Newcastle (NSW) Learning Lounge

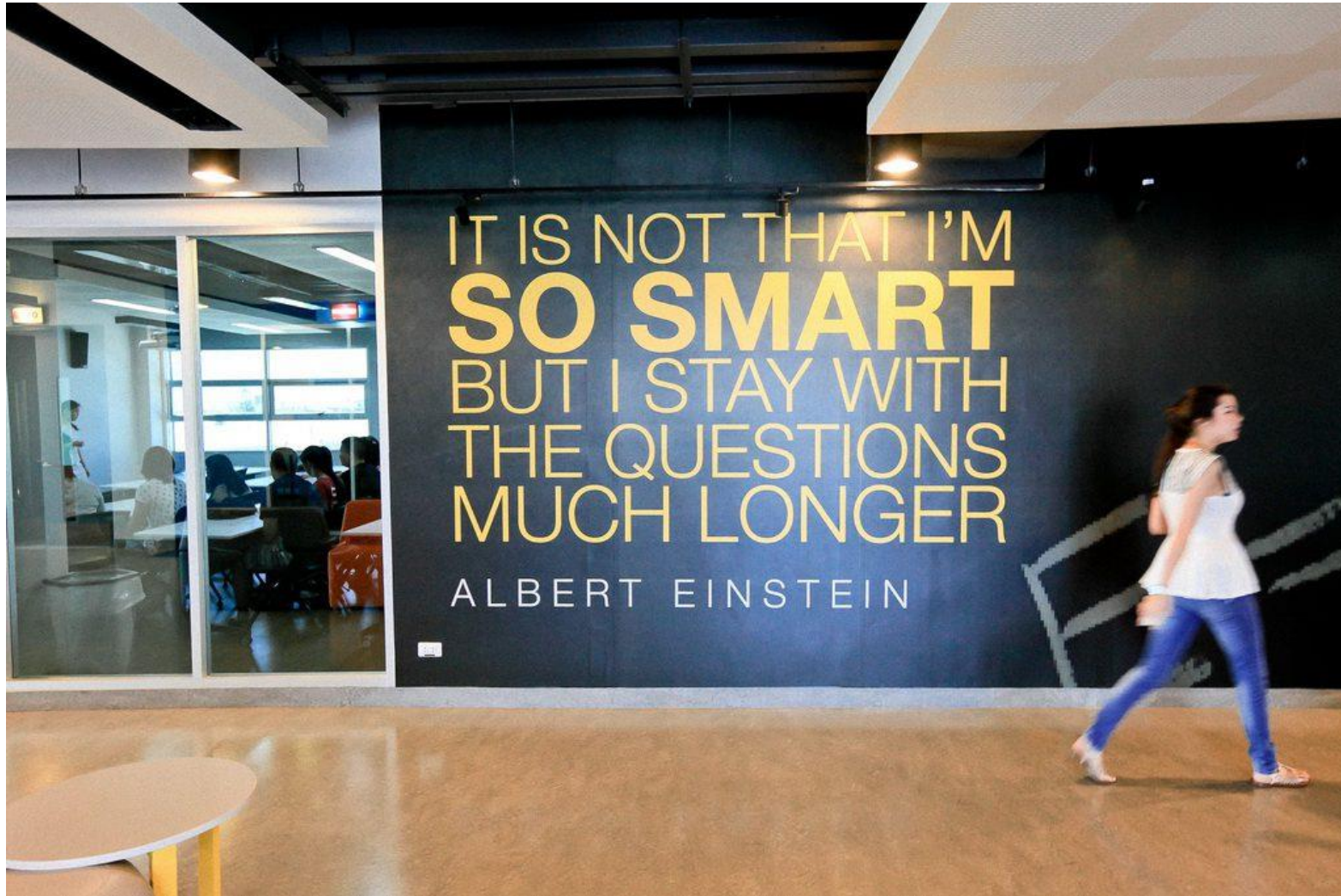


# Australian Thesis Library





# Student Centre and Library



Stamford University





# The University of Wollongong



Library Rooms





# Examples of different study and collaboration settings



University of  
Melbourne  
Baillieu Library



# Examples of different study and collaboration settings



University of  
Melbourne  
Baillieu Library

# Examples of different study and collaboration settings



University of  
Melbourne  
Baillieu Library

# Examples of different study and collaboration settings



University of Melbourne  
Baillieu Library



# Examples of different study and collaboration settings



University of  
Melbourne



# Examples of different study and collaboration settings



LaTrobe University  
Melbourne



# Examples of different study and collaboration settings

La Trobe University •  
Sydney Campus



# Examples of different study and collaboration settings



UNSW Library

# More Examples - UNSW

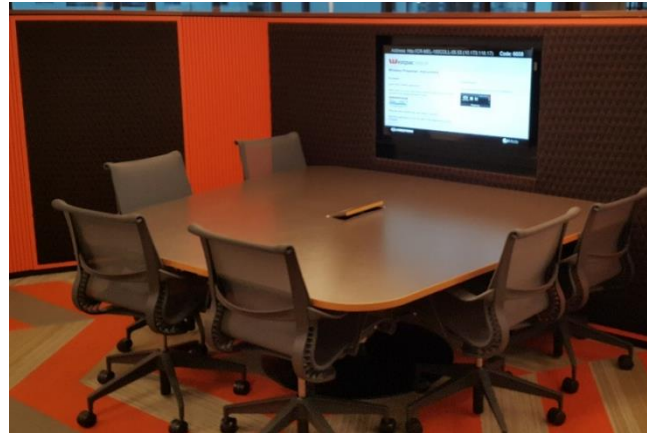
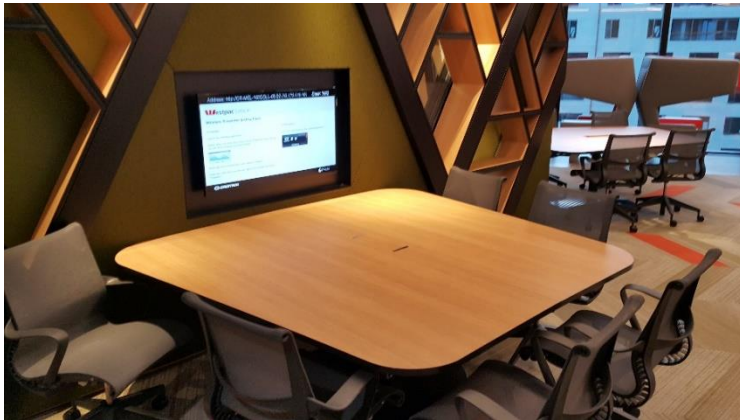




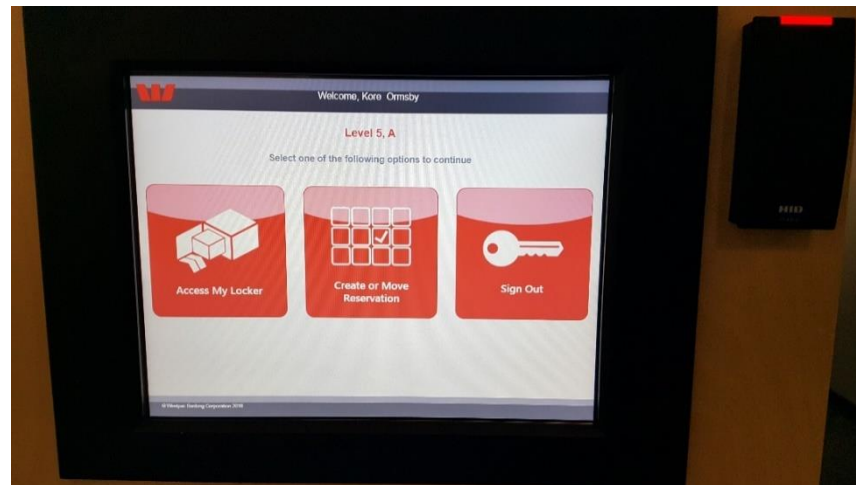
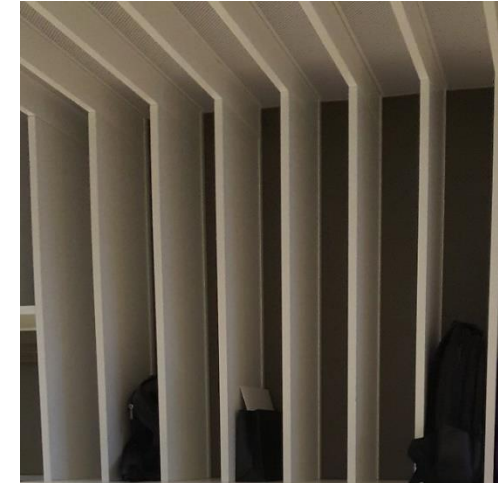
# Shared Screens to assist collaboration



# UAEU More Collaboration Spaces

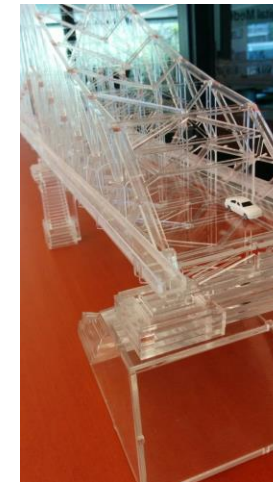
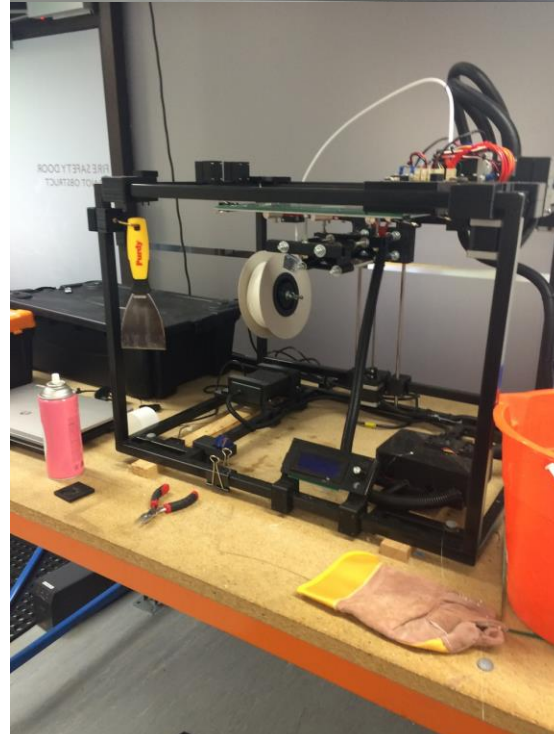


## Lockers – model of co-working

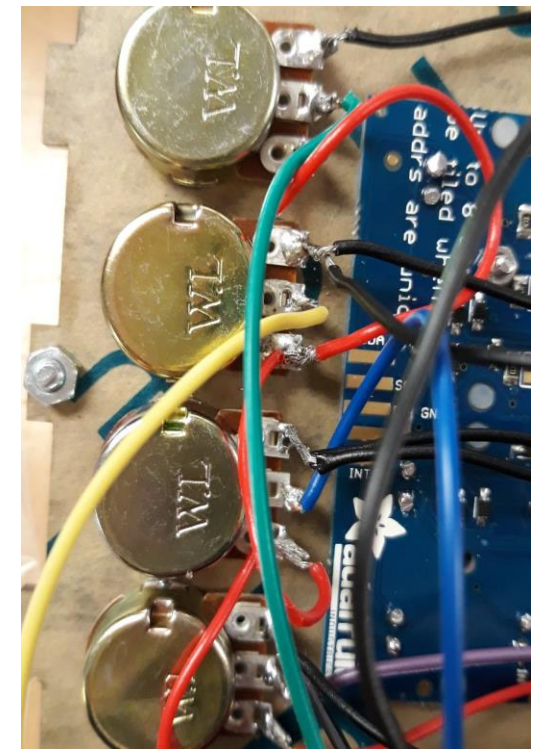




# Makers Spaces The Edge SLQ

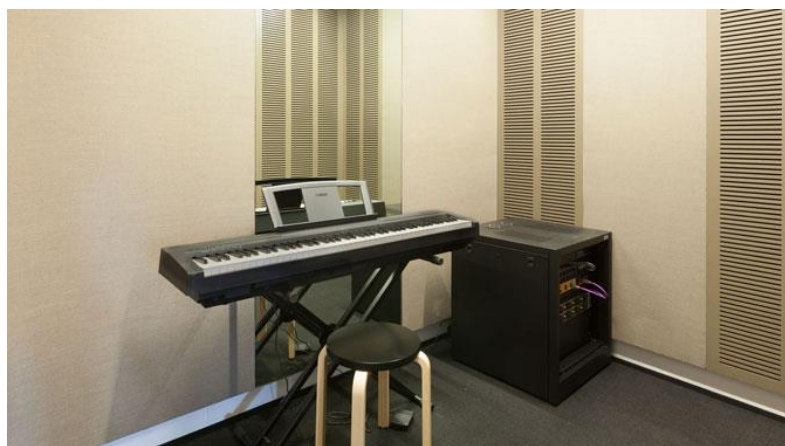
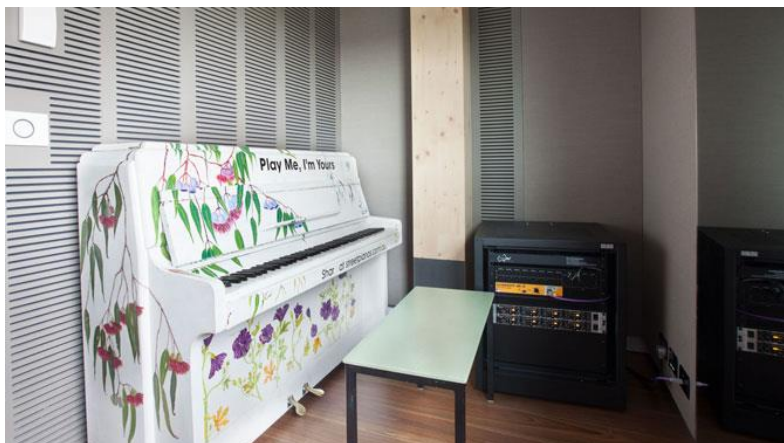


FabLab  
Coding with  
Raspberry Pi  
Hackathons





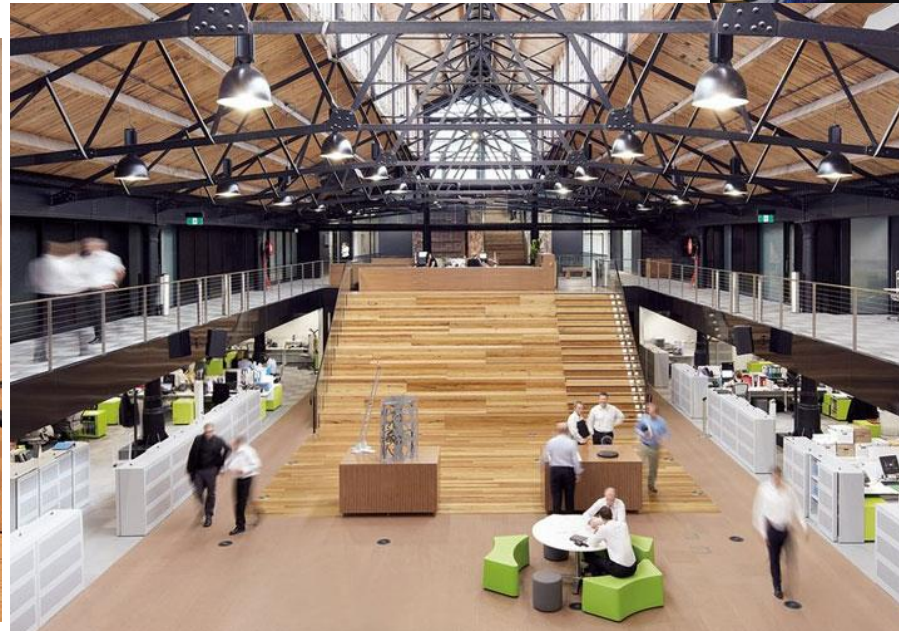
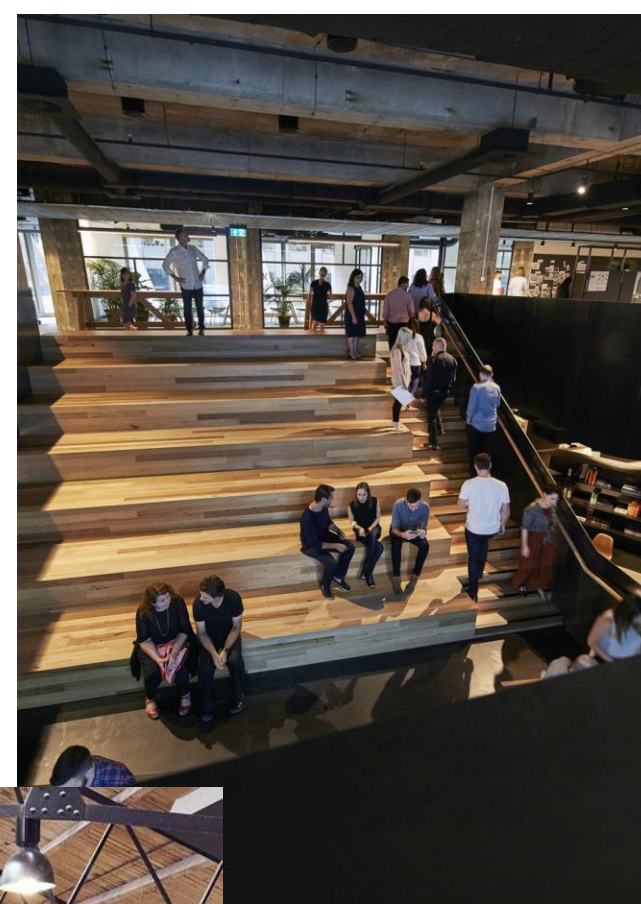






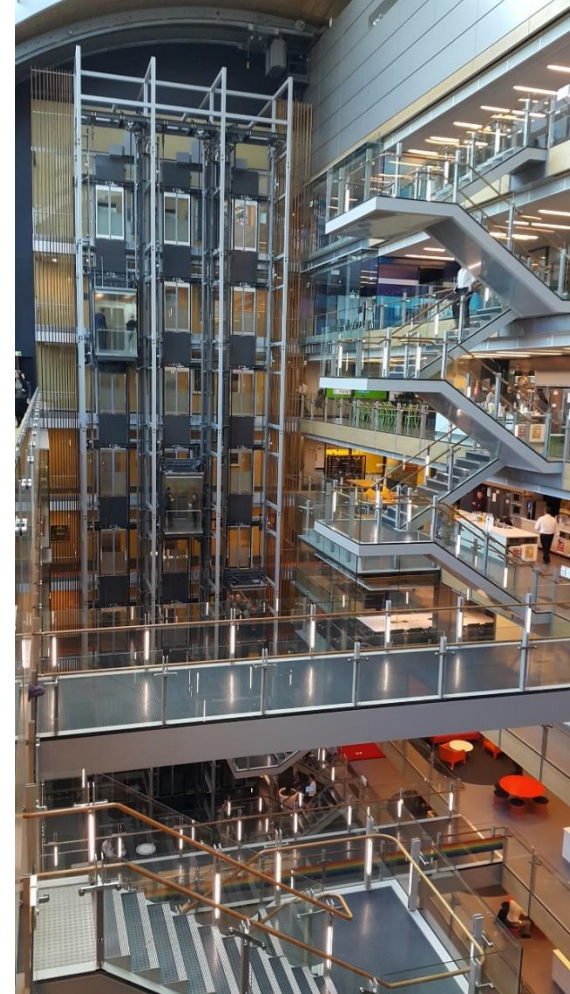
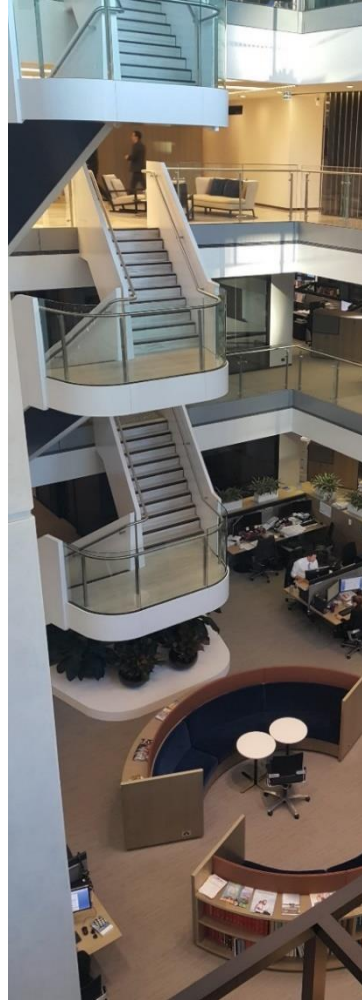
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# Performance Staircase

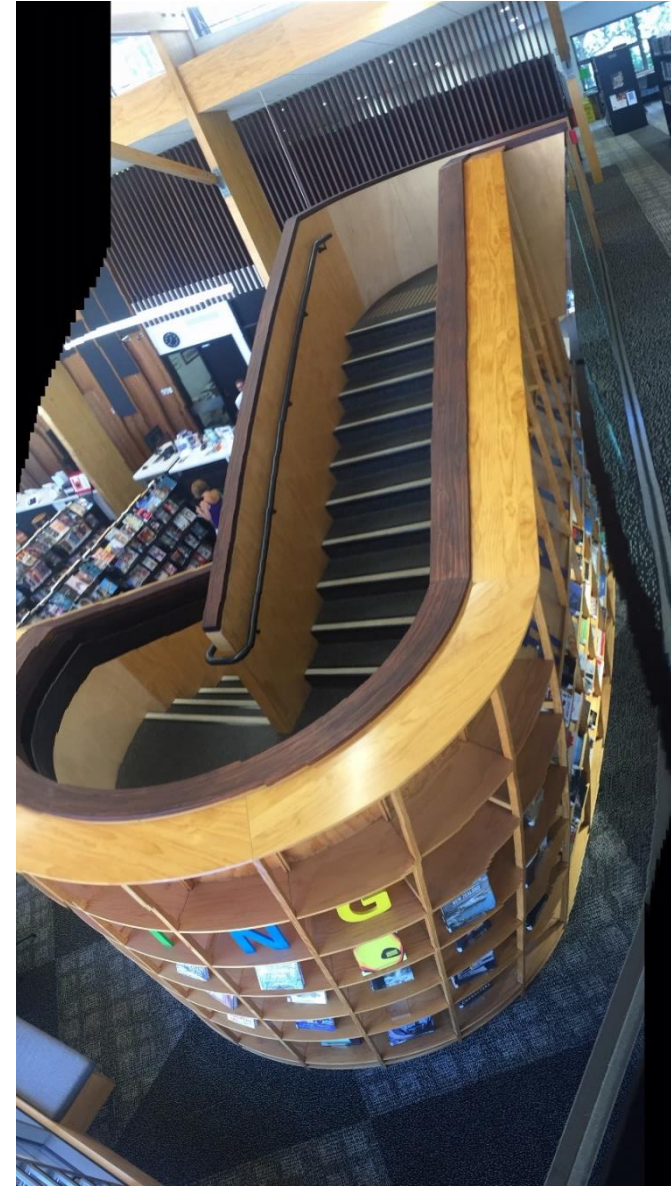
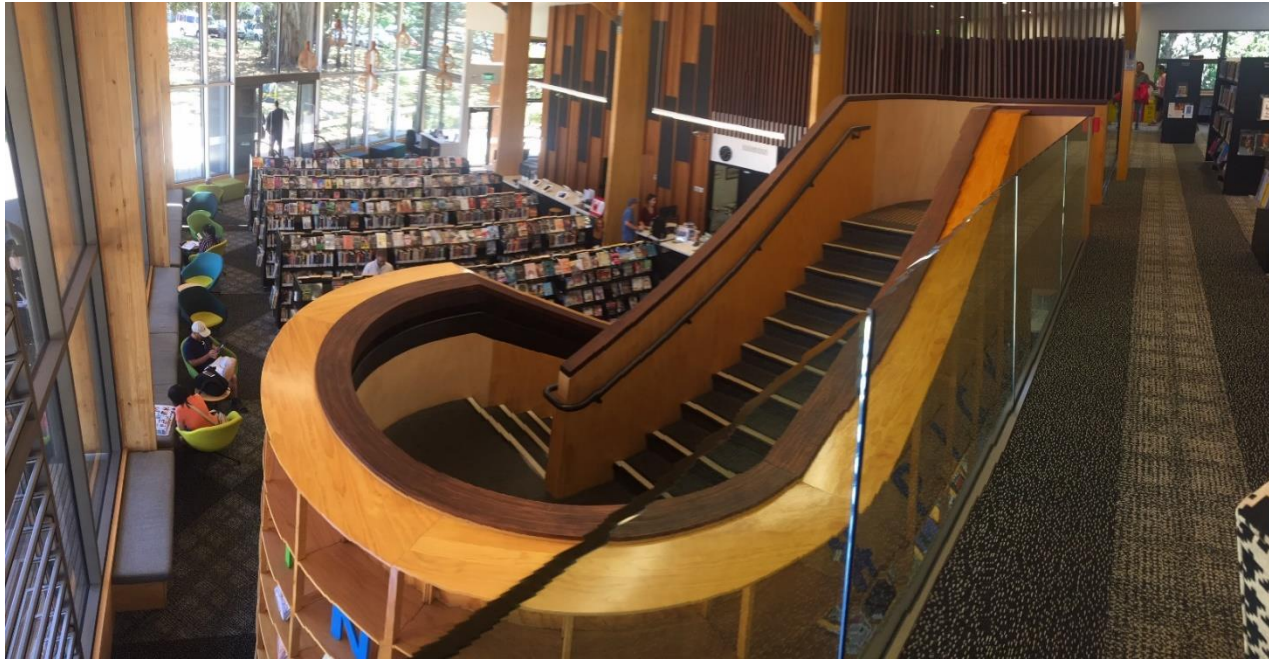




# Interconnecting stairs for Health and Connectivity



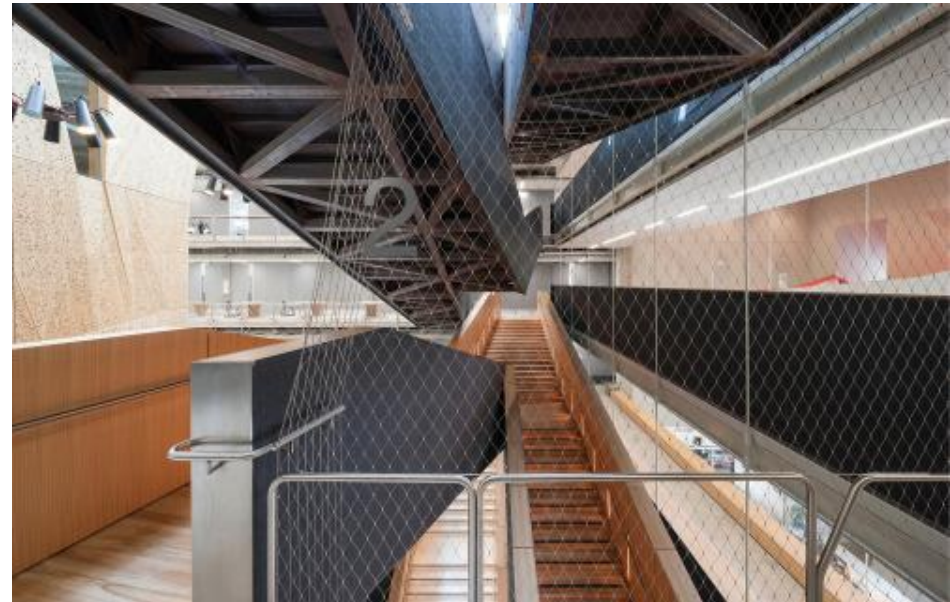
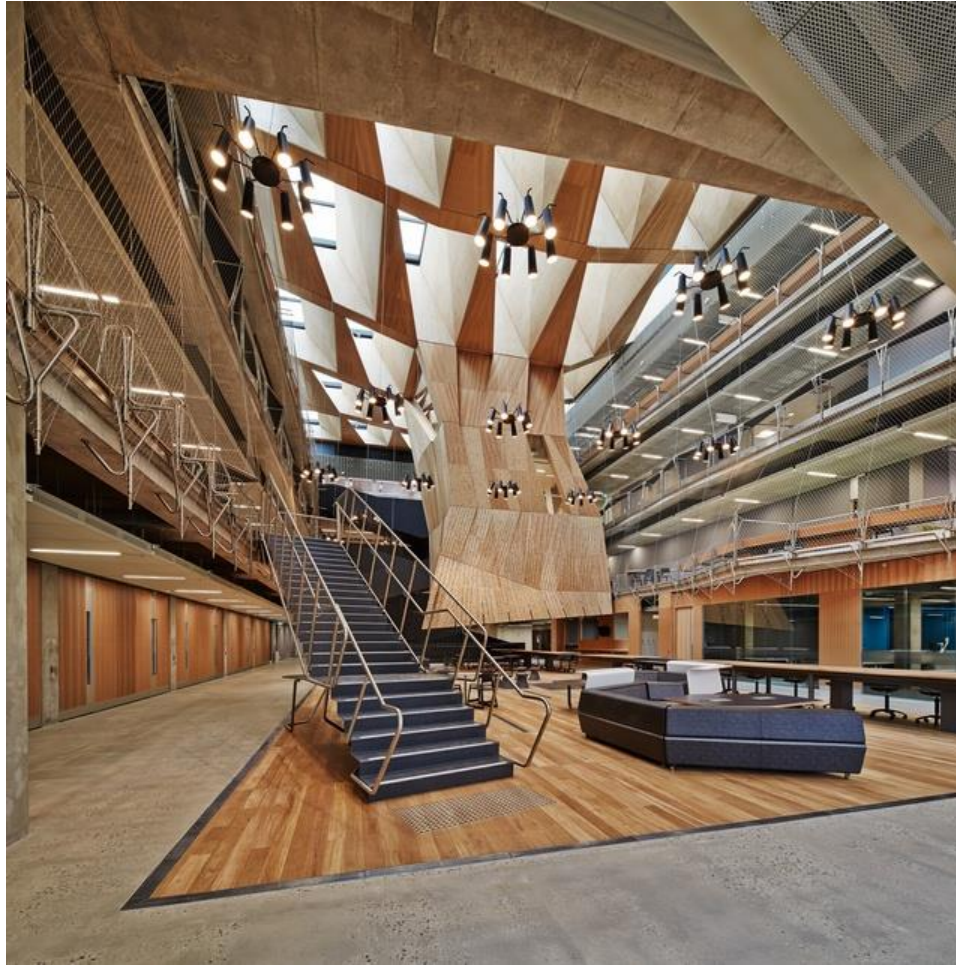
# Interconnecting stairs for Health and Connectivity



Auckland Library



# Interconnecting stairs for Health and Connectivity





# Stairs for Health and Connectivity



# Balconies for Access and Collaboration

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# Creative Lighting Colour Changing LEDS



# Creative Lighting



# Creative Lighting





# Internal Landscaping for Biophilic Benefits



## **Circular Economy**

Putting research into practice



**UAEU**

# Air-Conditioned Bus Stops



# Outdoor Projection Screens





# Opportunities for Projection ART





# Opportunities for Projection ART





# Zayed University Library



**UAEU**

# Zayed University Library





# The Library by the Dock, Melbourne



# Adaptable Space





# Water Features - Monash University Clayton Campus



# UAEU Water Features - Monash University Clayton Campus





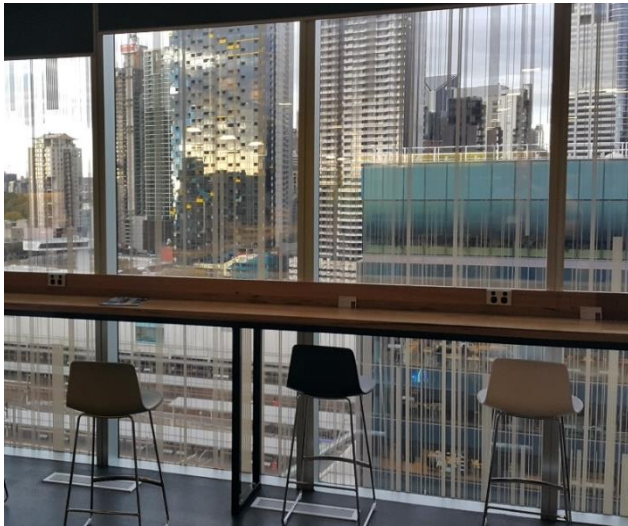
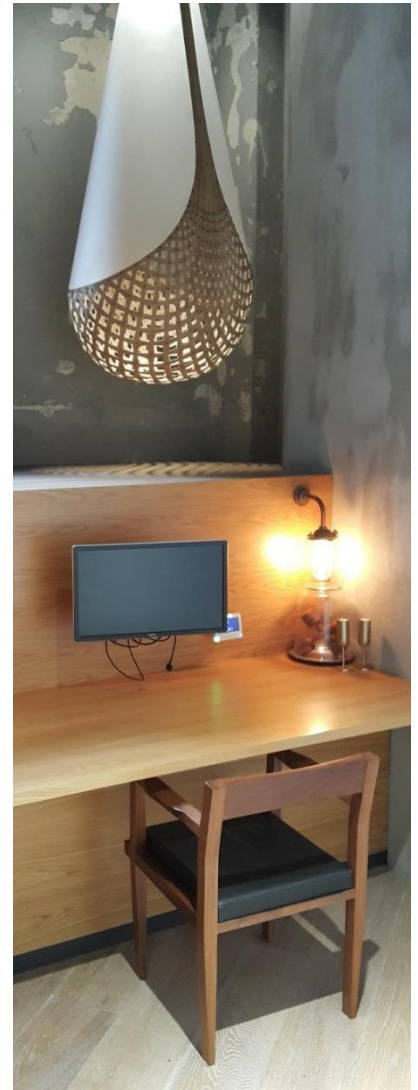
# Different Study Spaces





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# Different Study Spaces





# Formal and Informal Meeting Spaces

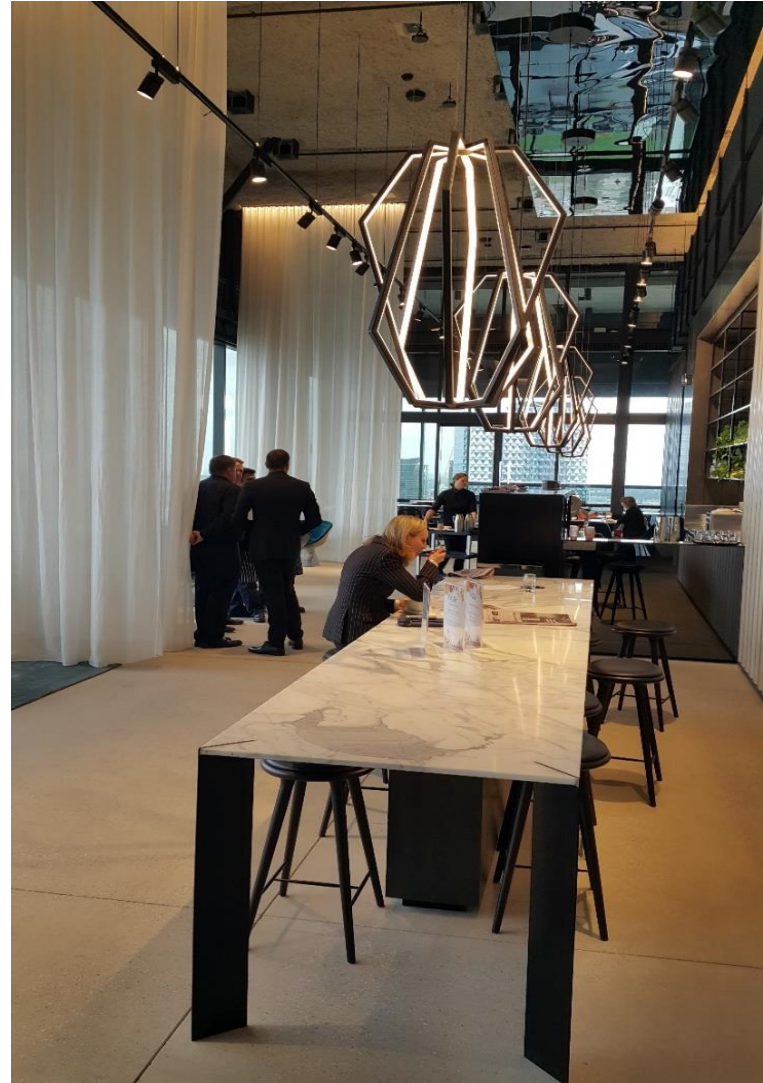




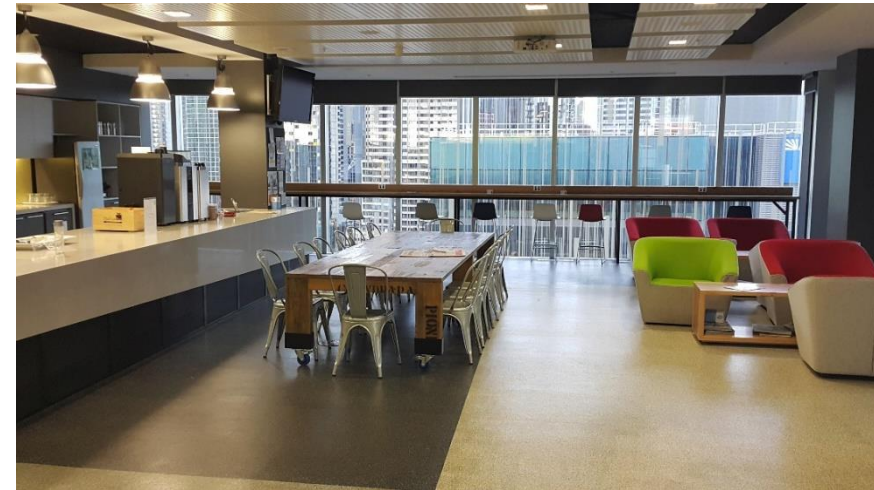
# Formal and Informal Meeting Spaces



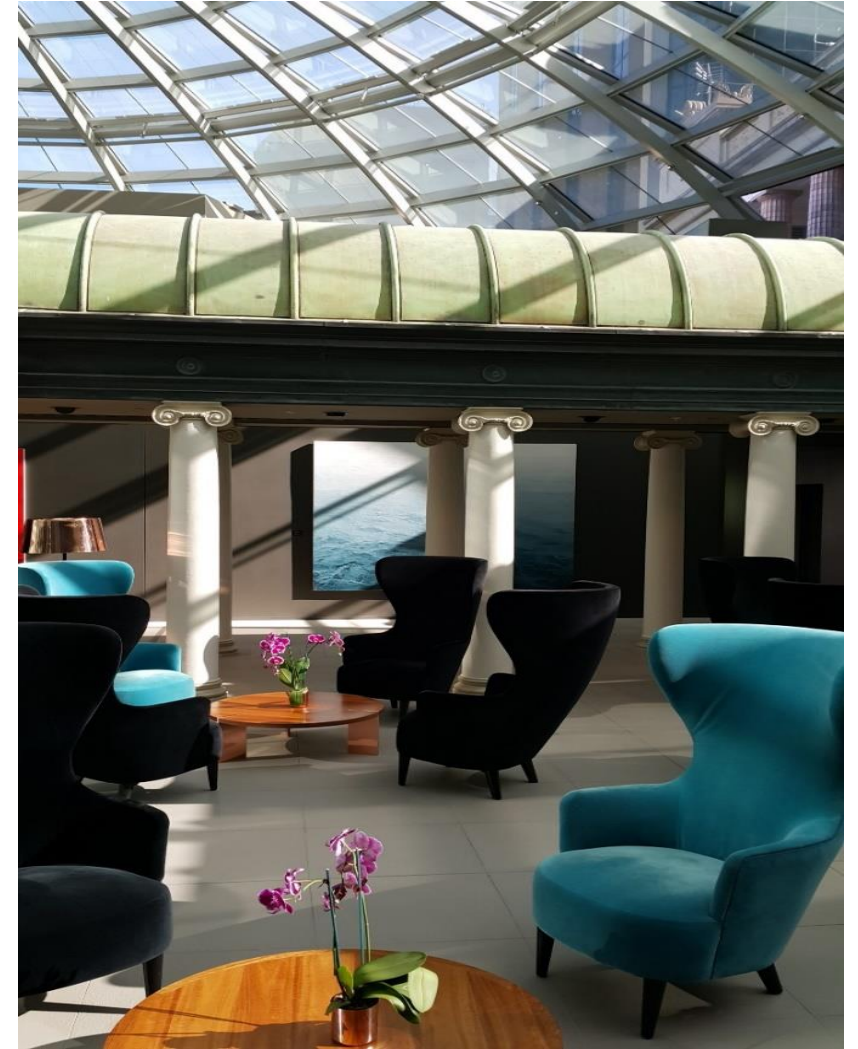
# Breakout Spaces



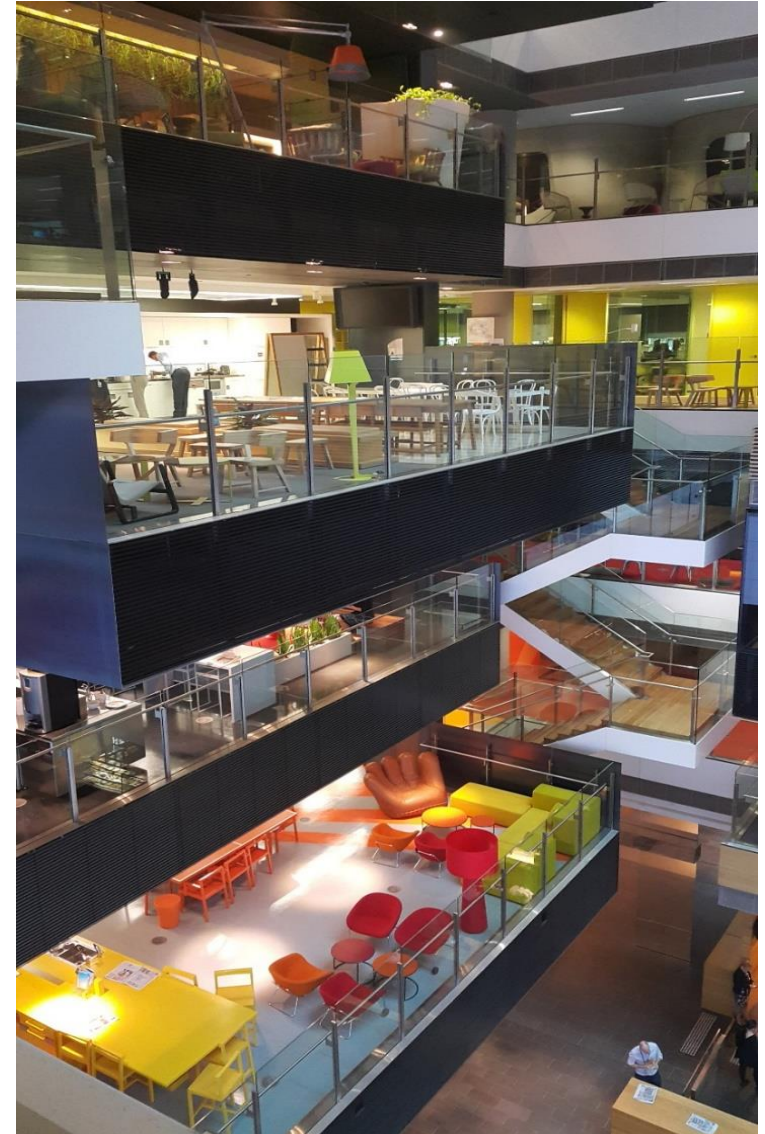
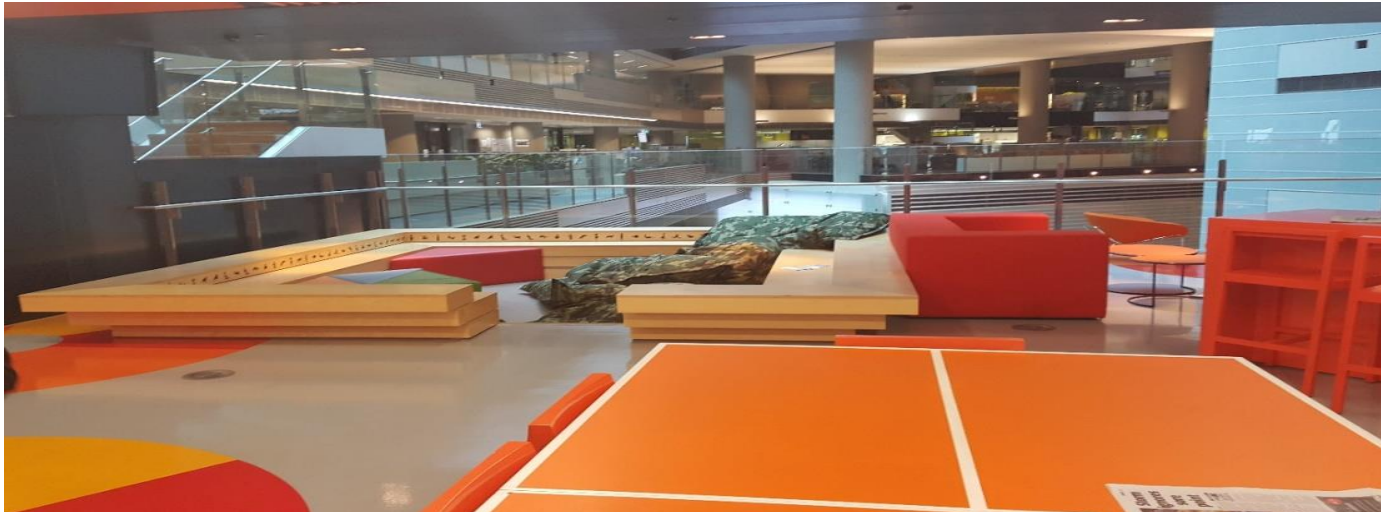
# Breakout Spaces



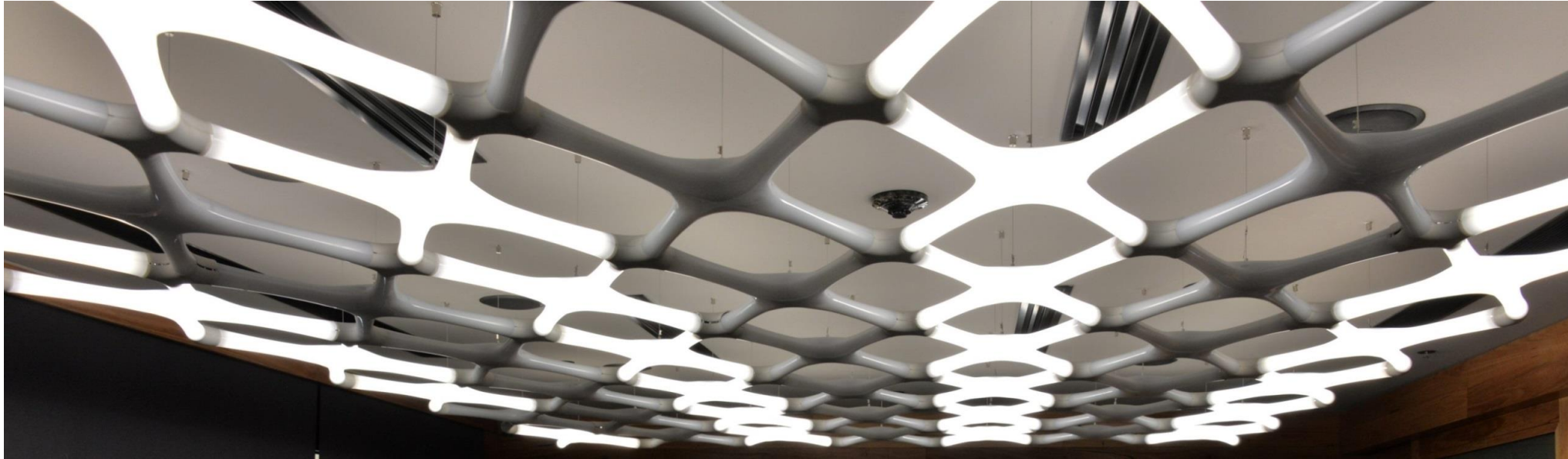
# Breakout Spaces



# Breakout Spaces



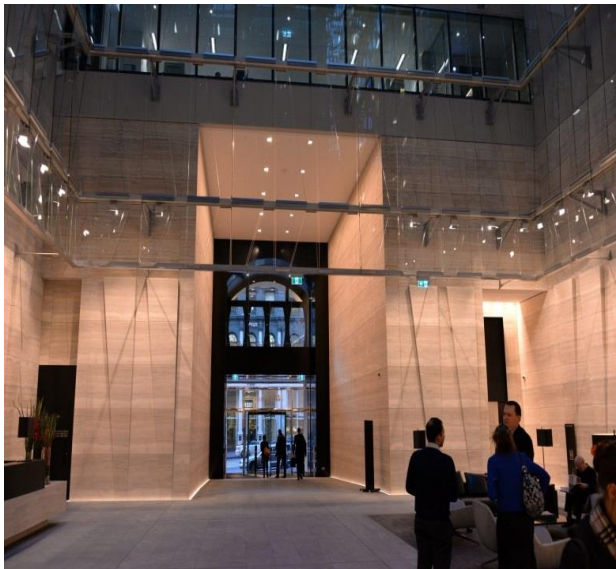
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**Technologies**



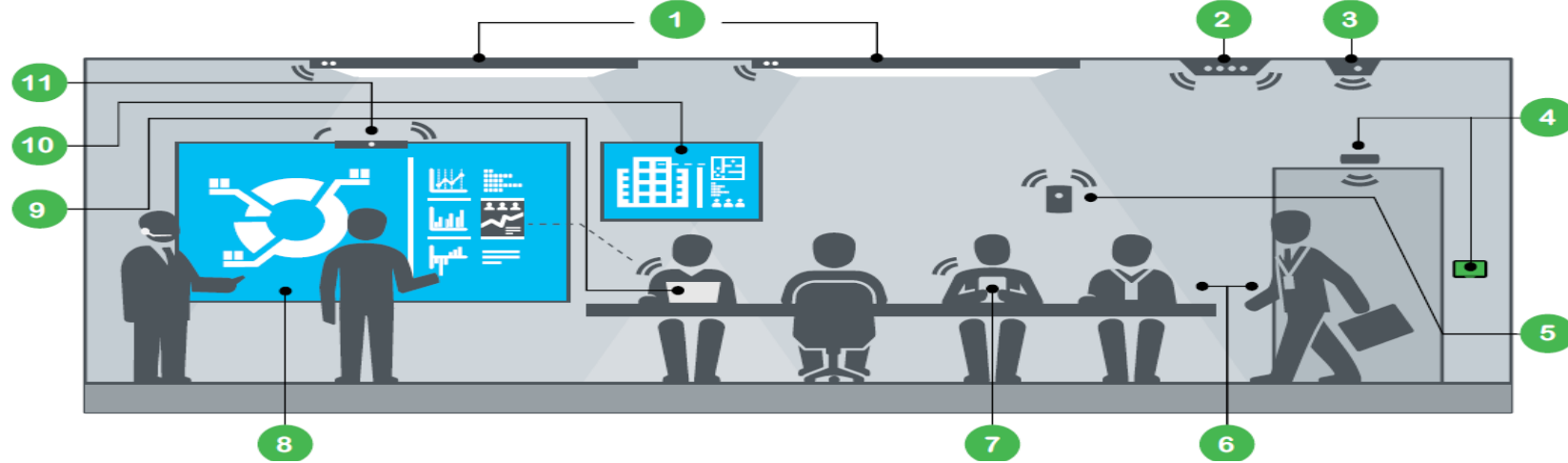
## Lighting



### LIGHTING

- Task lighting
- Movable light fixtures for optimal task lighting and ergonomics
- Smart lighting

# Future Smart Meeting Rooms



## 1: Future smart lighting

Power over ethernet (PoE) LED lighting with intelligent sensors and the ability for user app control. Future LiFi wireless data.

## 2: Smart room central sensor

Key head for monitoring presence and lux (lighting) level as well as BLE radio node to pick up occupancy and sociometric badges as well as data from other wireless sensors in the room. On the cabled IP backbone.

## 3: WiFi Smart Access Point (AP)

WiFi coverage as well as location layer data and 'digital exhaust'.

## 4: Door sensor

Door sensor for measuring occupancy and intelligent door sign for room booking and NFC check in.

## 5: Air quality smart sensor

Wall mounted wireless sensor for measuring air quality (CO2 etc).

## 6: Sociometrics

Smart badges that report on location and manage presence and occupancy.

## 7: Smart phone

App based control of environment, mood setting, audiovisual as well as services such as food and drink.

## 8: Immersive AV

Smart collaboration systems, such as Microsoft's Surface Hub, Oblong or Nureva with video conference and side digital 'cork boards' as well as haptic control.

## 9: Wireless presenter

Connectivity for portable devices to connect and share content.

## 10: Big data

Visualisation and presentation of data, from the ability to show building metrics such as energy efficiency to a 'who's in' and 'find the expert' platform.

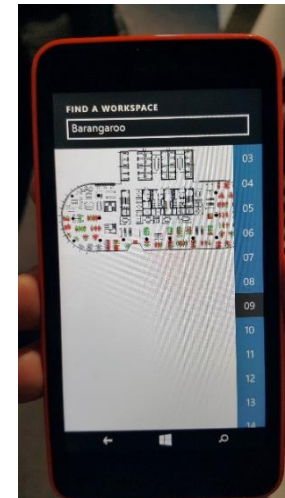
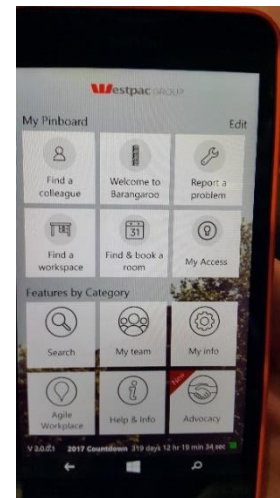
## 11: Smart audio

Ability to create discrete sound fields, use automated 'assistants' and voice control.

## Other Technologies

### ELECTRONIC ROOM BOOKING

- Apps
- Touchscreen calendar pads for room booking
- Intelligent display
- Electronic tables



## Other Technologies



### SOPHISTICATED ACCESS CONTROL

- Electronic control system
- Elegant glass and steel design

### SWITCHABLE ELECTRIC PRIVACY GLASS

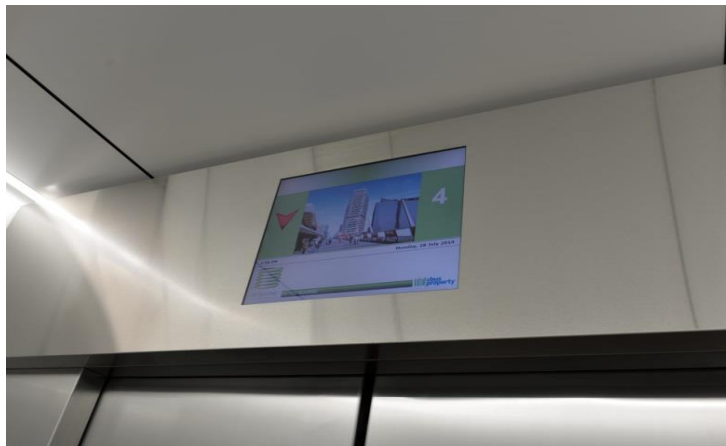
- When activated, the glass changes from transparent to translucent
- This gives control of privacy



### WIRELESS PHONE CHARGING MAT

- Wirelessly charges electronic devices

# Other Technologies



## BUILDING INFORMATION

- Display in lifts / lobbies / communal areas
- Display business strategies / sustainable features of the building
- Advertisements
- Information to occupants

# Activated outdoor space



Northern Plaza, MGS, TCL, Neo Construct 2016  
Photo: Andrew Lloyd

- Drivers
- Culture
- Consultation
- Pace of Change
- Physical change as agent for organisational change

# Thank you

**Janette Wright**

**UAEU LIBRARIES**

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