

The background image shows a bustling university campus. In the foreground, a diverse group of students is engaged in various activities: some are looking at laptops, others are talking on mobile phones, and one is holding a camera. The students are dressed in casual attire. In the background, modern university buildings with large windows and glass facades are visible under a clear blue sky. The overall atmosphere is one of active learning and technological integration.

foresight

Campus of the Future

Dr Anne Kovachevich
Arup QLD ESD Leader | Australasian Foresight + Innovation Representative

ARUP

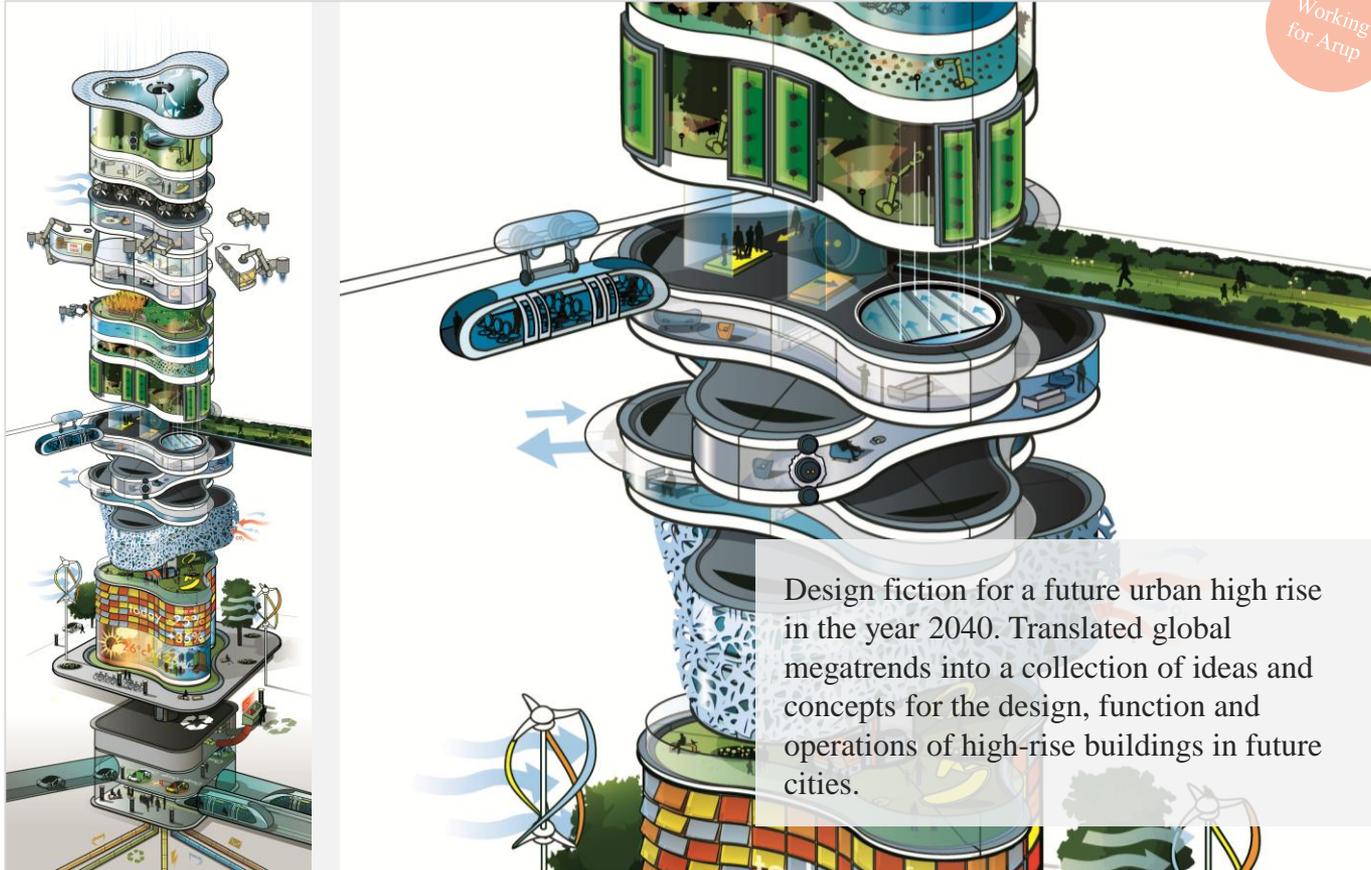
Arup Foresight + Innovation + Research



Arup Foresight + Innovation

phys lounge

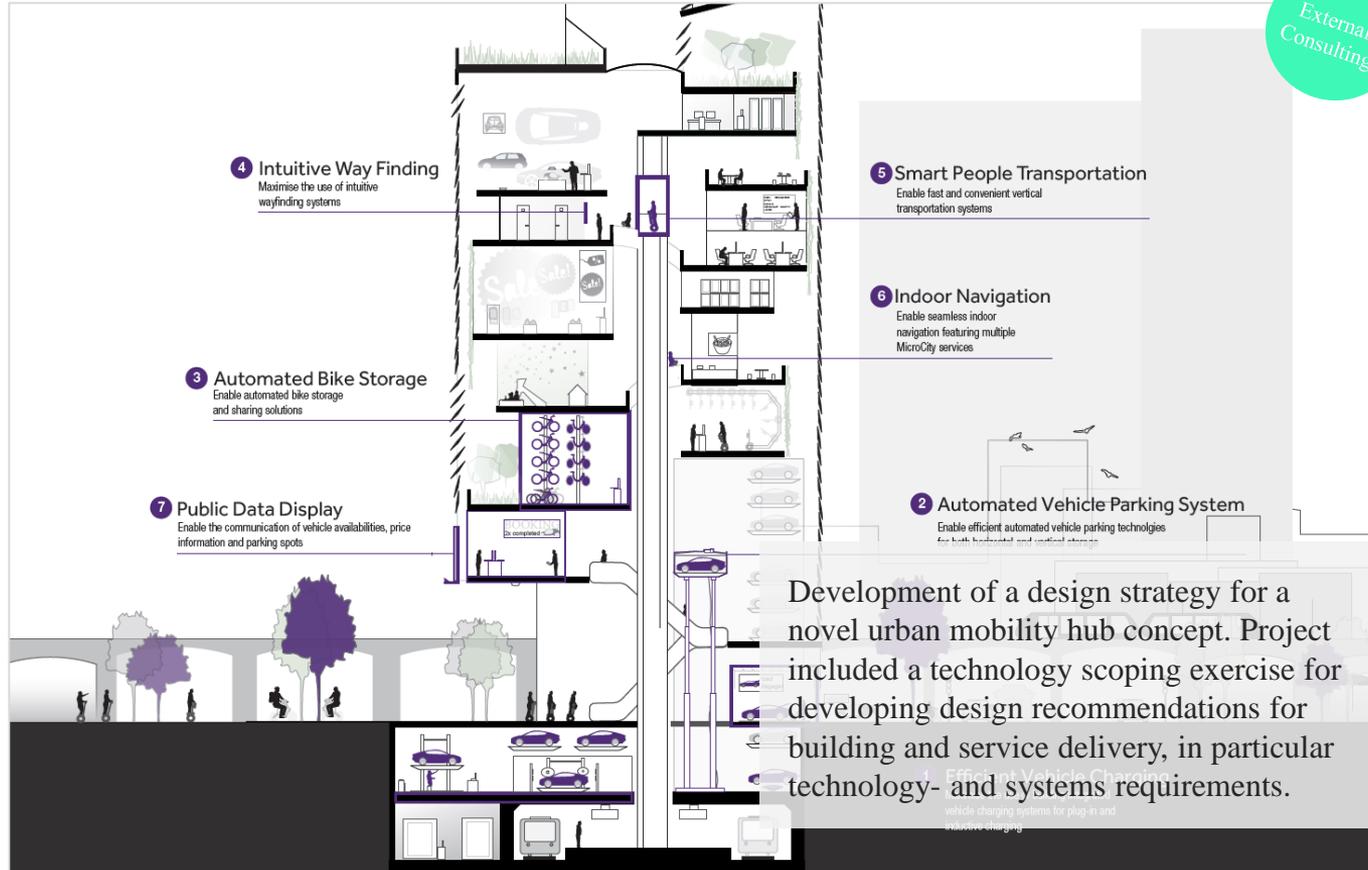




Design fiction for a future urban high rise in the year 2040. Translated global megatrends into a collection of ideas and concepts for the design, function and operations of high-rise buildings in future cities.

Vehicle Manufacturer | Urban Mobility Hub – Design Strategy

External
Consulting

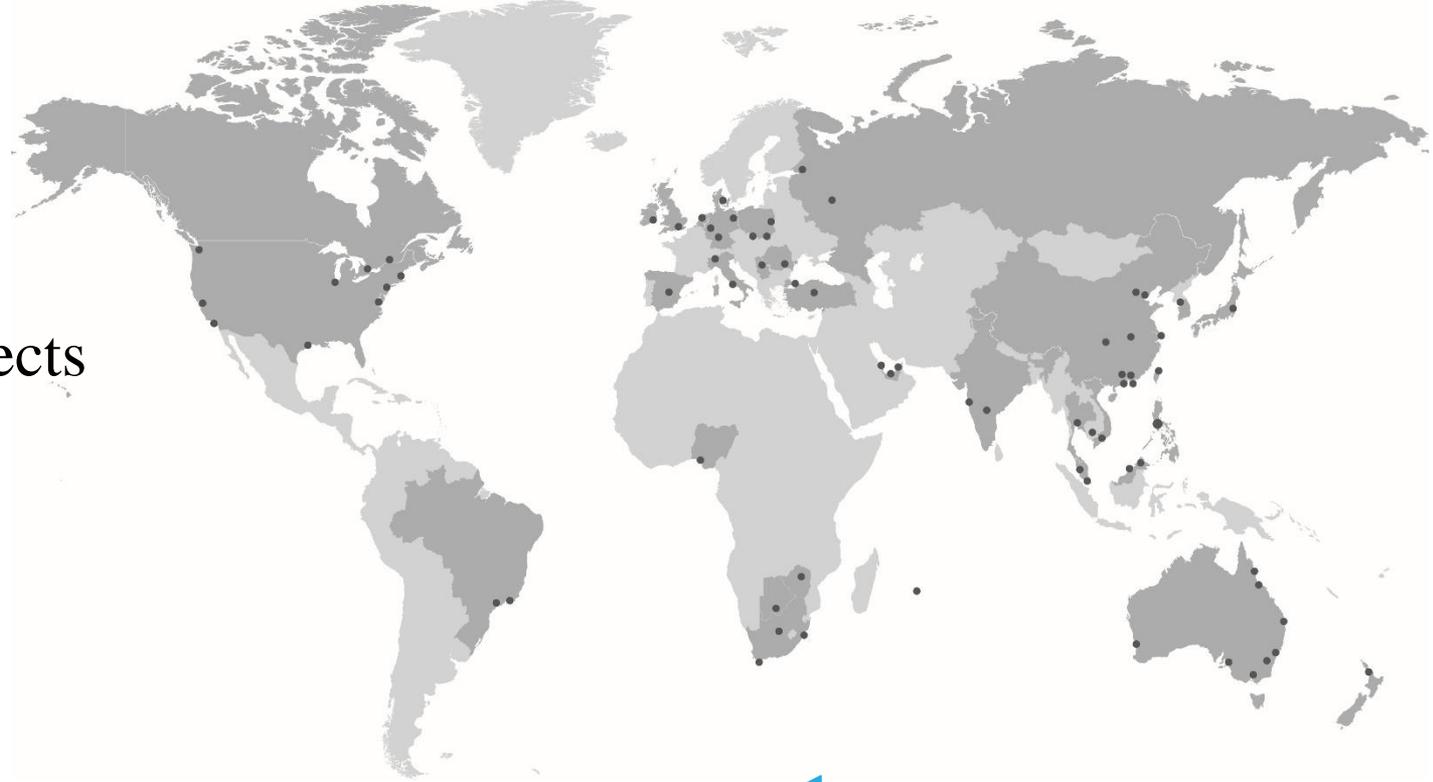


11,200

Education Projects
Globally

1354

Education Projects
Regionally



1

Average project / per current staff member

change is constant

Shanghai | Pudong 1990



Shanghai | Pudong 2010



ARUP

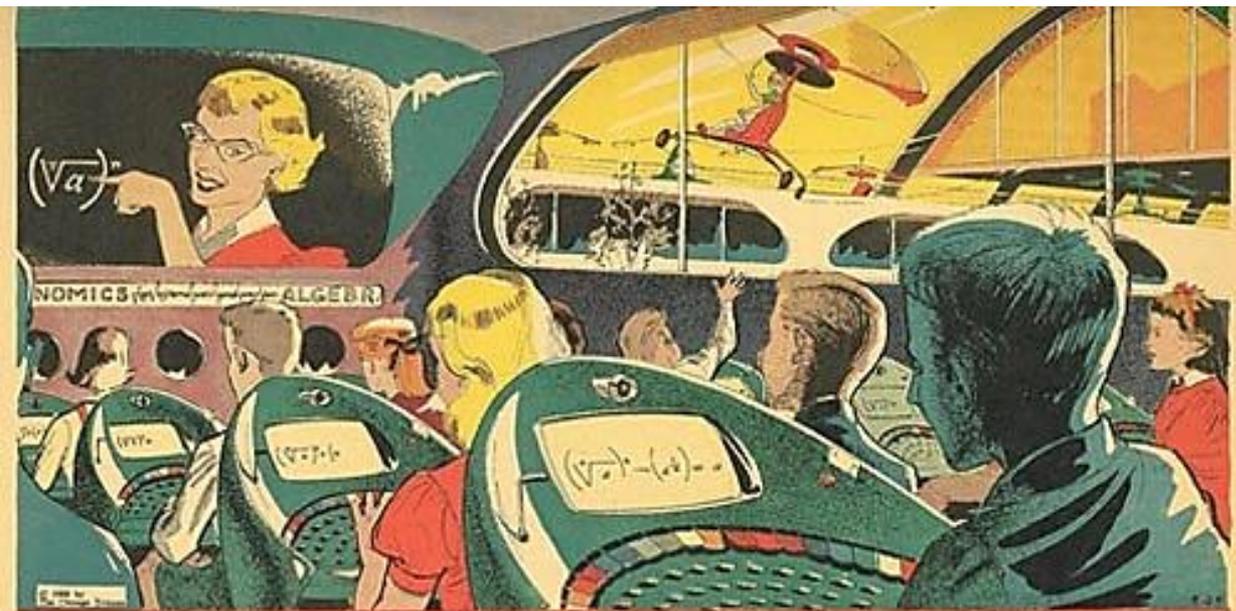
Papal Inauguration | 2005



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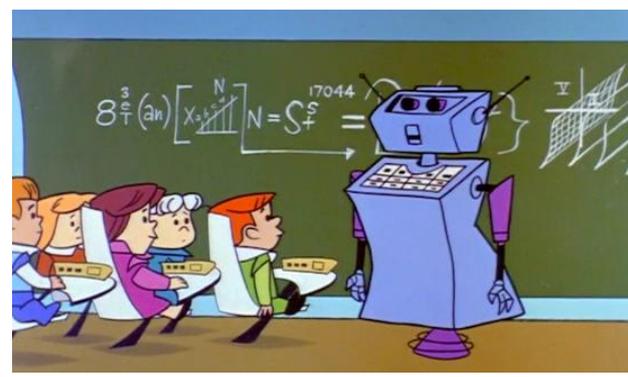
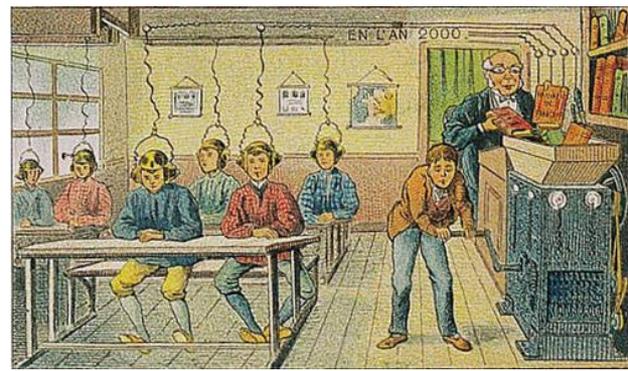
change is constant,
context is variable



PUSH-BUTTON EDUCATION

Tomorrow's schools will be more crowded; teachers will be correspondingly fewer. Plans for a push-button school have already been proposed by Dr. Simon Ramo, science faculty member at California Institute of Technology. Teaching would be by means of sound movies and mechanical tabulating

machines. Pupils would record attendance and answer questions by pushing buttons. Special machines would be "geared" for each individual student so he could advance as rapidly as his abilities warranted. Progress records, also kept by machine, would be periodically reviewed by skilled teachers, and personal help would be available when necessary.



Campus of the Future paper



- Students of the future
- Changing the delivery of higher education
- Physical facilities and learning environments
- Skills needed by future employer



Students of the future

1. 18 year olds of the Future
2. Greater Diversity
3. Mature Students

18 year olds of the Future



Students of the future will :

- Want educational experiences that integrate immersive, experiential nature of computer gaming
- Expect on line access to colleagues, peers and faculty staff
- Expect instant access to learning materials
- Want to enter job market with a set of transferable skills giving career flexibility over time

Students of the future will :

- Anticipate (volatile) at best or adverse (at worst) global economic conditions
- Not expect to find work easily and are prepared to compete in a tight market
- Do not have faith in government or public pension plans
- Expect to remain agile and not remain long with any employer
- Anticipate the need to travel for opportunities



Design Lab- University of California

Students of the future

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Diversity



Population Growth in Australia (Source Australian Bureau of Statistics)

- 1 birth every 1 min 44 seconds
- 1 death every 3 mins 27 seconds
- A net gain of 1 international migration every 2 mins 13 seconds

Leads to an overall population increase of - 1 person every 1 min 21 seconds



Students of the future

1. 18 year olds of the Future
2. Greater Diversity
3. Mature Students

Mature Students



University of Derby
example from campus paper



UNIVERSITY
of DERBY

ONLINE LEARNING

Changing the Delivery of Higher Education



Changing the Delivery of

1. Technology Enabled
2. Connected
3. Flexible
4. Resource Rich
5. Collaborative
6. Experiential

Southeastern Louisiana University example from campus paper



Changing the Delivery of

1. Technology Enabled

2. Connected

3. Flexible

4. Resource Rich

5. Collaborative

6. Experiential

University of Southern Denmark example from campus paper



University of Southern Denmark example from campus paper





Changing the Delivery of

1. Technology Enabled

2. Connected

3. Flexible

4. Resource Rich

5. Collaborative

6. Experiential

Students will seek personalized customizable learning environments and schedules



Changing the Delivery of

1. Technology Enabled
2. Connected
3. Flexible
4. Resource Rich
5. Collaborative
6. Experiential

Changing the Delivery of

1. Technology Enabled
2. Connected
3. Flexible
4. Resource Rich
5. Collaborative
6. Experiential

Welcome to the Australasia Region Learning Portal

[About Moodle](#) ▶



My modules



Building Design at Arup



Health, Safety & Environment (HSE)
Induction

[View all](#)

New modules added



Fire Safety of Road Tunnels -
suppression, structural performance
& construction

The third lecture in Peter Johnson's series
on fire safety of road tunnels covering fire



Site Safety Essentials Refresher
(SSER)

This course is designed to refresh staff

Latest news

Learning Events upgrade

A new version of the Learning Events function is
now available on the Moodle site. This brings with
by Vicky Hague | 11 Jun 2015

Moodle now live in 4 out of 5 Regions

The UKMEA Region launched their Moodle
catalogue and new enrolment process on 31st
by Vicky Hague | 24 Nov 2014

Videos



2:18

Virtually human: Creating ProjectOVE

Arup's 35 storey, 170m tall BIM building in the
shape of a human body, which is changing the

[Tall Buildings animation](#)

Changing the Delivery of

1. Technology Enabled
2. Connected
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ISS
—03

UdN International
Summer School 2011

ClimateCultures ————— **The Survey of the Everyday**

Einladung —————
Sommerfest & Abschlusspräsentation

Final Presentations, Friday 26/08/2011,
10:00 am, are public!

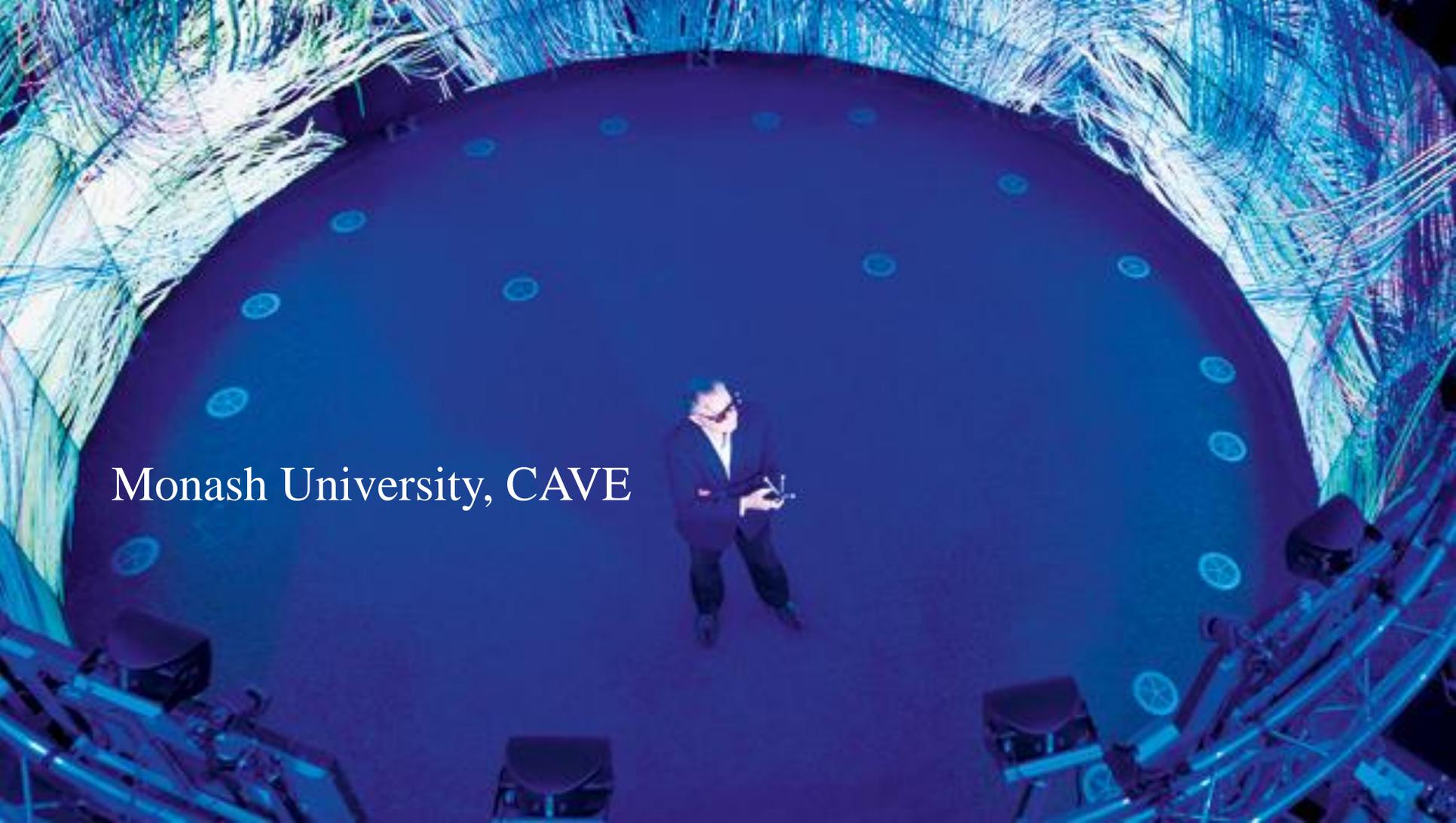
Come and join.

Kommen Sie und diskutieren Sie mit uns.

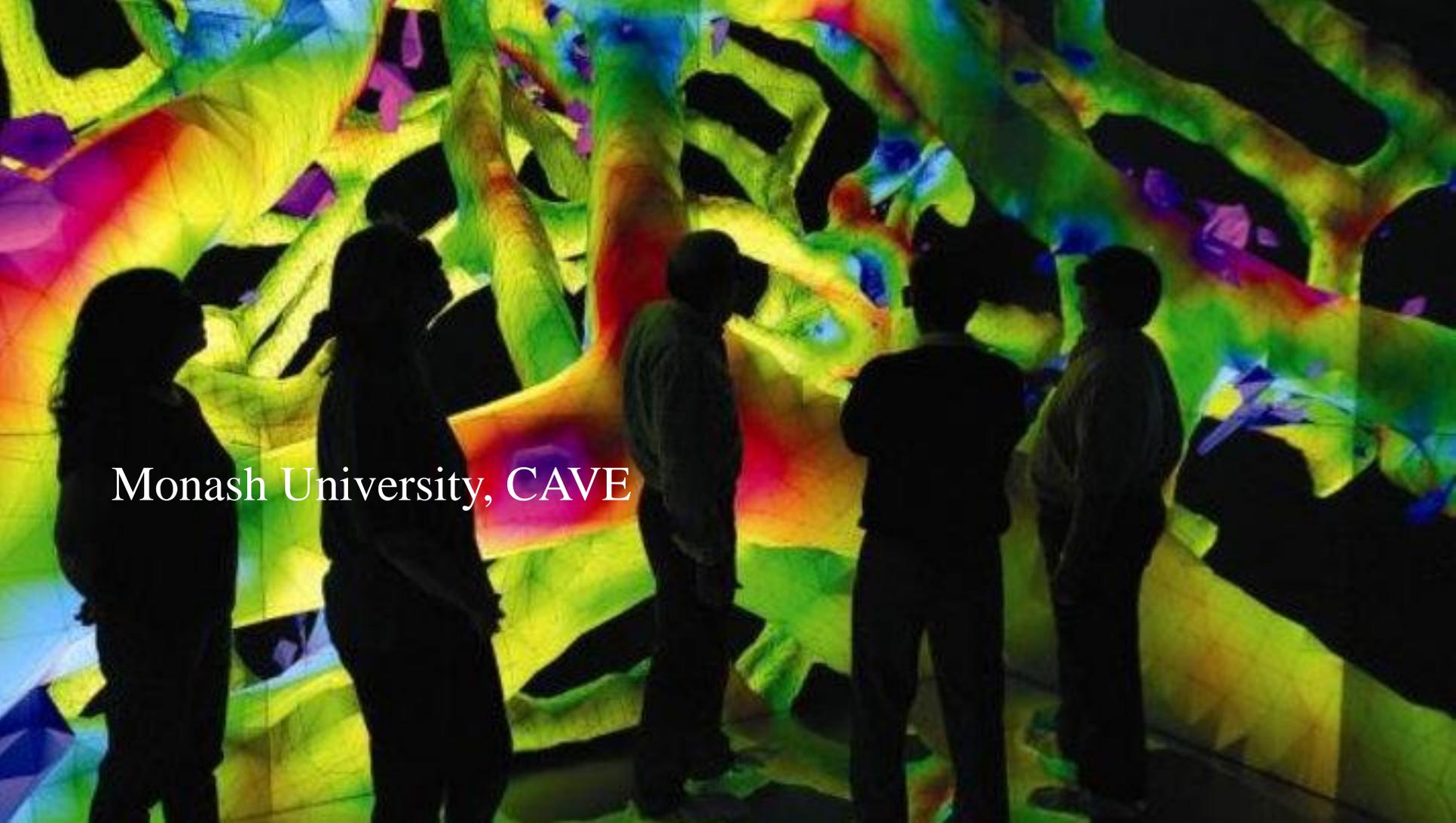
Wir laden Sie herzlich zur Ausstellungseröffnung
der UdN Summer School 2011 ein, sowie zum
anschließenden Sommerfest.

Zeit: 17:00 Uhr

Ort: Universität der Nachbarschaften in Hamburg,
Wilhelmsburg, Rothenhäuser Damm 30,
21107 Hamburg



Monash University, CAVE

A group of people are standing in a CAVE (Cave Automatic Virtual Environment) setup. They are looking at a large, colorful 3D visualization that appears to be a complex network or structure, possibly representing a biological or geological system. The visualization is composed of many interconnected, translucent, multi-colored surfaces in shades of green, yellow, orange, red, and purple. The people are silhouetted against the bright, colorful background of the virtual environment. The text "Monash University, CAVE" is overlaid on the image in white serif font.

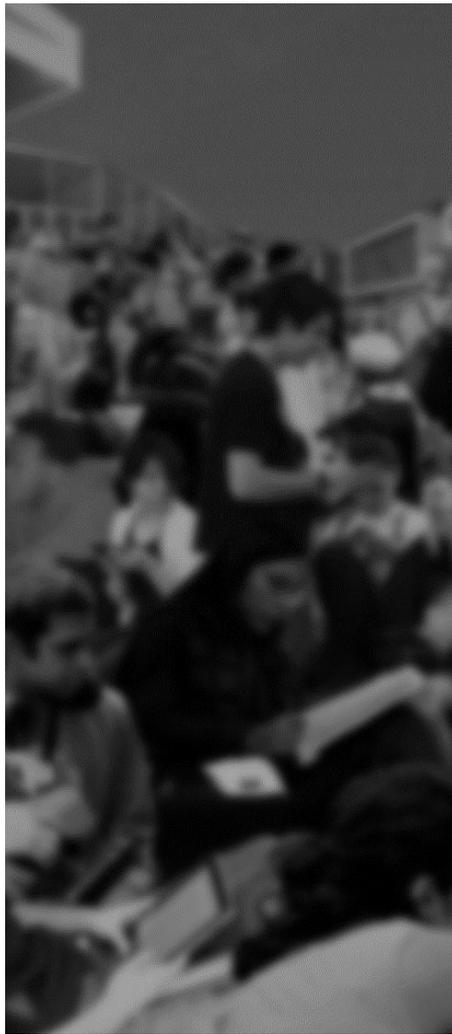
Monash University, CAVE

[Artificial tutors with human capabilities]

Empathic robot tutors in classrooms to facilitate
teaching and learning



Physical Facilities and Sustainable Learning Environments



drivers of change

demographics

virtual gaming

demographics technological

demographics

technological



virtual gaming

ARUP

virtual gaming

JupiterResearch estimates that the massively multiplayer online games (MMOG) industry generates revenues of US\$350bn a year, and occupies about nine hours a week for the typical player. Most gamers are between the ages of 18 and 34. MMOG games fall into four genres:



demographics

ISSUES

social

- changing households
- ageing population
- obesity
- social media
- urban migration

technological

- bionic humans
- brain plasticity
- genetic screening
- virtue engineering
- virtual gaming

economic

- dependency ratios
- two-speed society
- womenomics
- labour gaps
- chronic disease

environmental

- climate change
- consumption impacts
- motorisation
- environmental refugees
- desertification

political

- HIV/AIDS
- resource conflicts
- food industry
- primary needs
- undocumented labour

Virtual Campus

DRIVERS OF CHANGE SETS

- climate change
- convergence
- demographics





University of Chicago





Global Change Institute
University of Queensland



Tyree Energy Technology
Building
University of New South
Wales



New Space
University of Newcastle



Clinical Practices Building
James Cook University,
Cairns



Dr Chau Chak Wing
Building
University of Technology
New South Wales

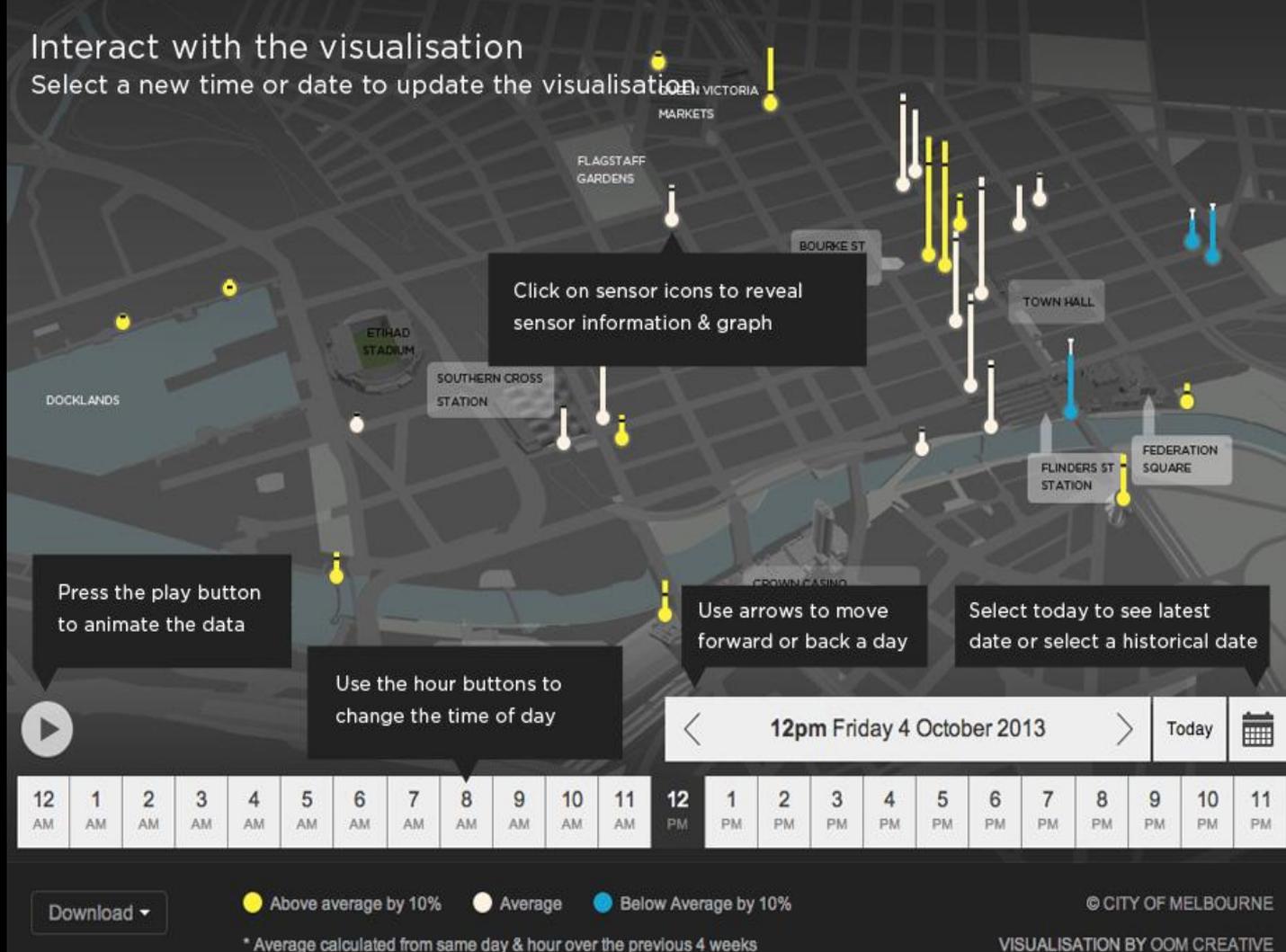


Architecture School of
design
University of Melbourne



Interact with the visualisation

Select a new time or date to update the visualisation



Press the play button to animate the data

Use the hour buttons to change the time of day

Click on sensor icons to reveal sensor information & graph

Use arrows to move forward or back a day

Select today to see latest date or select a historical date



< 12pm Friday 4 October 2013 > Today

12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
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Download ▾

Above average by 10% Average Below Average by 10%

* Average calculated from same day & hour over the previous 4 weeks

© CITY OF MELBOURNE

VISUALISATION BY OOM CREATIVE

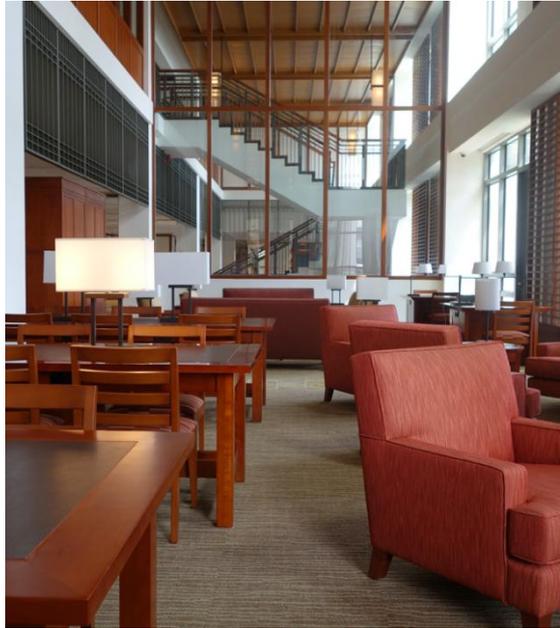
YALE Campus NUS - Singapore



This new campus located at NUS university town spans 64,104 square meters and includes:

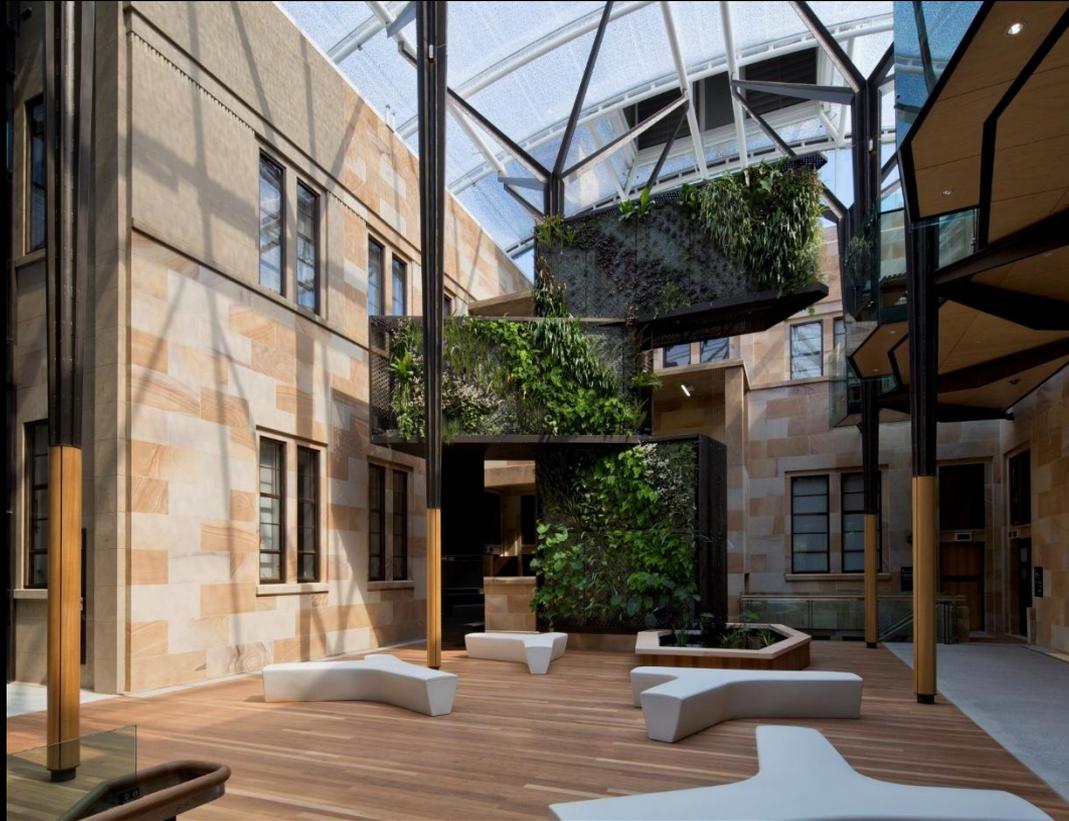
- 3 courtyards
- 3 towers (one for each residential college)
- 30 sky gardens
- Sports hall and fitness centre
- Amphitheatre, costume shop and music practice rooms
- Multimedia Hub
- Art and dance studios and science labs
- Black box theatre

YALE Campus NUS - Singapore



Case Study

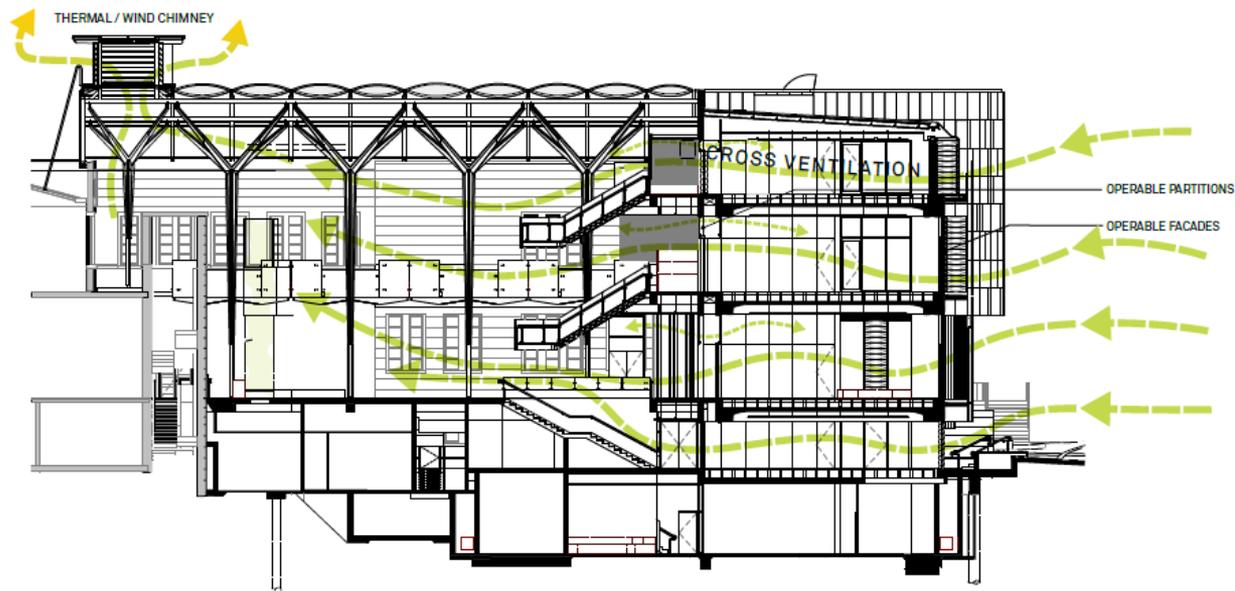
Global Change Institute



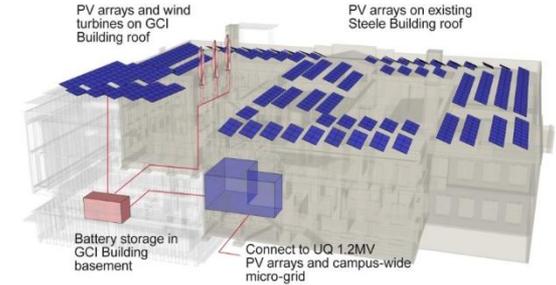


Natural ventilation

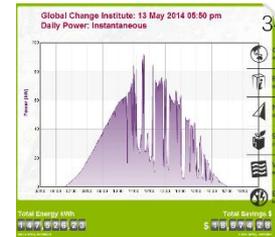
Designed to operate in natural ventilation mode for 88% of the year



Global Change Institute



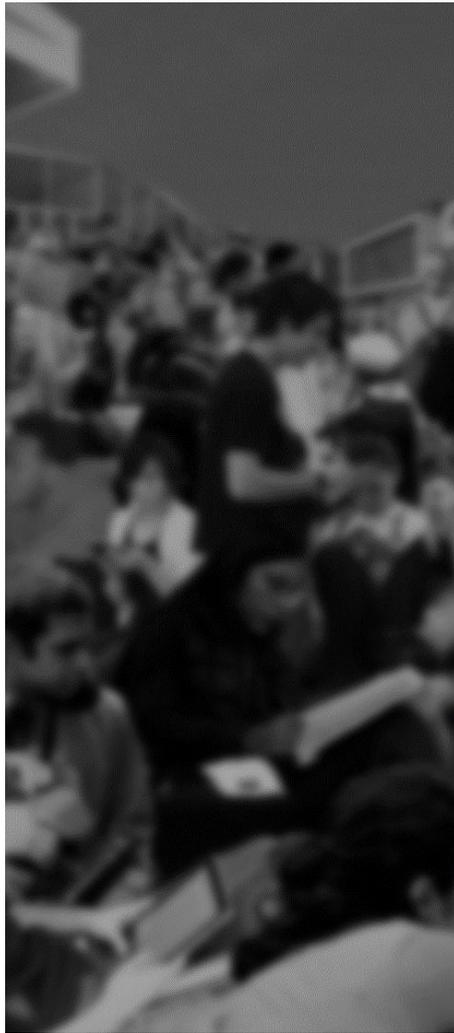
- ETFE Roof
- Geopolymer concrete
- Biofiltration wall
- PV and Batteries





SafeCampus

Future Skills Needed in the Marketplace



Future Skills Needed in the Marketplace

1. Industry Requirement

2. HEI Response

3. Corporatised

De Vry University in New York



**WANT TO BE
A CYBER WARRIOR?**

Learn from hands-on cyber attack simulations and prepare for a career in cyber security with our *Cyber Security Programming Specialization*.

Learn More »

Future Skills Needed in the Marketplace

1. Industry Requirement

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IE SMU MBA



IE-SMU MBA

Language
English

Format
Blended

Intake
September

Length
12 Months



Discover the IE-SMU MBA

The MBA that connects Europe and Asia

The 21st century has been labeled by many as the 'Asian Century' as many more nations and businesses in the region become bigger players globally. IE Business School and SMU offer an MBA that covers the very best of business management with a distinct Asian perspective. The program combines online learning with five short face-to-face periods in Singapore and Madrid.

[REQUEST MORE INFORMATION](#)

Obtain a global curriculum and an Asian perspective

This MBA program is aimed at **experienced professionals** looking to expand their horizons and gain a greater insight into **Asian markets and businesses**. The program brings together a world-class faculty from **IE Business School**, ranked by Financial Times as the No 3 business school in Europe, and **Singapore Management University (SMU)**, one of the most prestigious management universities in Asia.

The curriculum is aimed at developing a number of key skills needed to succeed on the global stage. Courses include **Business Strategy and Global Context, Strategic Management in Asia, Leadership, and Managing Innovation and Growth**.

The IE-SMU MBA follows a **blended methodology combining face-to-face periods with continuous online study**. Students meet in Singapore and Madrid on five occasions. The rest of the program is taught via the Virtual Campus, offering the opportunity to gain a world class MBA while also being able to focus on your professional and personal life.



Khine Tharaphe Din
People Operations Manager, Myanmar

"The best part is the diversity my classmates have brought to the class. The discussions are so enriching and I get to learn how a very simple subject is viewed very uniquely in different industries"



Gregoire Droz
Portfolio Manager, Switzerland

"This MBA is a bridge between cultures. Wherever you want to go in the world, from Asia to North-America, from Europe to South-America, this MBA will open any door"



Pavanpal Singh
Build-to-Order Officer in Charge, Singapore

"Having this sort of unique blended program allows me to concentrate on both my education and my full time job. It is the way all relevant schools are moving forward and I want to stay ahead of the curve"

Future Skills Needed in the Marketplace

1. Industry Requirement

2. HEI Response

3. Corporatised

Corporatised Curricula

“The reform of education and the future of work are intertwined and being perceived as such will allow for the creation of an interactive collaborative atmosphere with immediate feedback and development.

I think that when you look at what’s going to be happening in higher education in the next 20-30 years and the pressure to do public private partnerships you’re going to see more and more private entities working with universities”

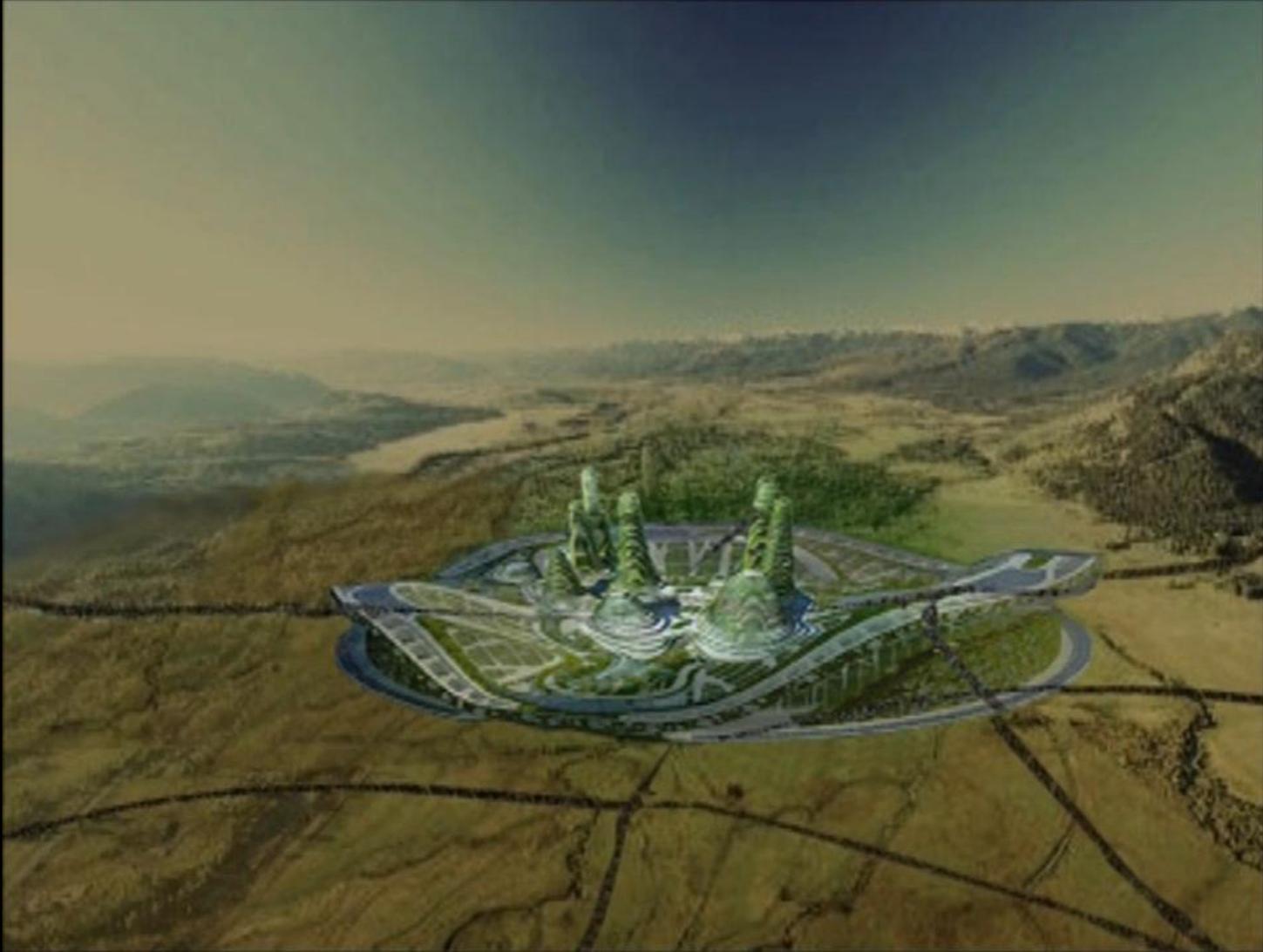
Provost Doris Helms of Clemson University



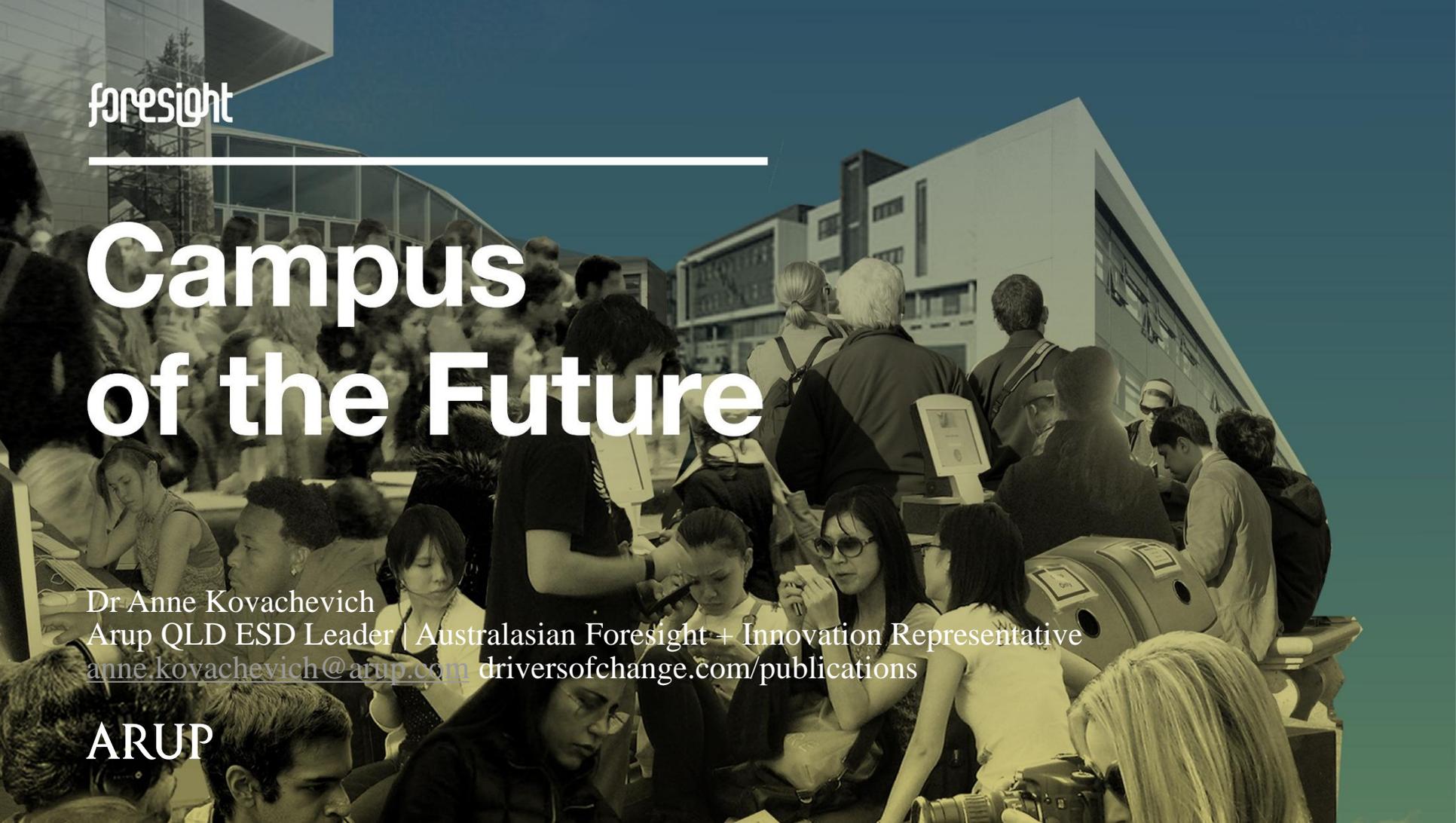
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Future Campus Narratives



ARUP

A vibrant, high-angle photograph of a university campus. The scene is filled with students engaged in various activities: some are sitting at tables, others are standing and talking, and a few are looking at digital displays. The architecture is modern, with large glass windows and clean lines. The overall atmosphere is one of active learning and collaboration. The image has a slightly desaturated, teal-tinted color palette.

foresight

Campus of the Future

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ARUP