How will the campus of tomorrow impact university real estate today?

EY NextWave Education

The better the question. The better the answer. The better the world works.
University estate and infrastructure strategies are now on the frontline of innovation — with the potential to recycle up to $10 billion of property assets.
The traditional university model is underpinned by large footprints of physical real estate and infrastructure, giving Australian universities control of significant landholdings, estate and infrastructure assets. But the next wave of education will see Australia's universities rethink their core delivery models. The traditional campus model is becoming unsustainable. Not only is the higher education sector a mature market with slow growth, its margins are also being squeezed by government funding pressures and increased operating costs. At the same time, universities must respond to:

1. Demand for online learning and increased competition from alternative providers
2. Increased pressure for industry collaboration
3. Changing demand from employers
4. Growth in international recruitment

This paper discusses the impact of these four trends on real estate strategies, the challenges of endowment land and the new unbundled models that will define the campus of the future.

It looks at how real estate portfolios need to adapt to both support 21st century delivery and strengthen university balance sheets. For some, this will result in major changes to campus design, land uses and user types, with academic institutions decentralising, moving to precinct strategies or developing mixed use campuses.

It means that university estate and infrastructure strategies, which have remained largely unchanged for decades, are now on the frontline of innovation – with the potential to recycle or leverage up to $10 billion of property assets.

We look forward to working with the sector to right size real estate portfolios and repurpose assets to support the move to new higher education delivery models.

Catherine Friday
Managing Partner, Government and Health Sciences, Ernst & Young Australia
How will the campus of tomorrow impact university real estate today?

Four trends driving campus unbundling

Demand for online learning and increased competition from alternative providers

With the growth of online, virtual and distance learning options, Australian universities now compete in a global landscape. Increasing choice in education providers is fuelling student expectations of what universities should provide.

The future will not be faculty focussed, but learner-centric. Students will dictate how, where and when they wish to access education.

Future campus requirements

Technology-supported education delivery will require smaller, more interactive and digitally enriched learning environments, with:

- **Less space for some faculties** — Universities will need to “right-size” their physical accommodation footprints on a faculty by faculty basis. Online learning has next to no physical footprint. Mixed learning environments, for instance, a “flipped classroom” format in a business school, may require 50% to 60% less floor space than a traditional classroom. However, footprint savings will be minimal in faculties requiring hands-on, practical equipment, such as engineering or science.

At the same time, the uptake of smart technology in universities will continue to unlock a wealth of data to improve asset design, management and utilisation, further reducing campus footprints.

- **Decentralisation** — As universities adopt a learner-centric focus, they may end up decentralising key faculties to provide various typologies across different schools.

- **More flexibility** — As technology continues to evolve and further influence education delivery, universities will need buildings and infrastructure that is flexible, agile and capable of adaptation.

Eventually, we may see a wholesale reconsideration of where the main campus (if any) should be.

Case study

EY assisted a Victorian university with assessing opportunities for commercial partnerships on a campus which had been impacted by declining enrolment and competition from other universities.

EY considered the opportunity for the regeneration of the campus and brought commercial expertise to facilitate an EOI to identify potential partnerships for underutilised assets.

EY market reach identified eight EOI respondents with five progressing to commercial negotiations with the university.

1. EBITDA — Earnings before interest, tax, depreciation and amortization
Universities may start to challenge the traditional meaning and interpretation of campus altogether, which may no longer be just about physical accommodation. This could include rethinking the student experience, exclusive access to content or interaction with other universities, industry, resources and research.

### Case study

Flipped and informal learning is disrupting the need for the traditional campus footprint.

In 2014, UNSW Business School was refurbished to provide four flipped classrooms and two informal learning spaces. The space was capable of accommodating almost 300 people, reflecting a ratio of 4.66 sqm/EFTSL², 67% to 69% less than the Australian University average of 14 to 15 psm GFA/EFTSL.

### Australia's biggest online universities according to student online enrolment 2017 vs 2007

<table>
<thead>
<tr>
<th>University</th>
<th>2007</th>
<th>2017</th>
<th>Ten-year growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Sturt University</td>
<td>21,157</td>
<td>25,200</td>
<td>19%</td>
</tr>
<tr>
<td>University of New England</td>
<td>13,545</td>
<td>19,435</td>
<td>43%</td>
</tr>
<tr>
<td>University of Tasmania</td>
<td>1,084</td>
<td>18,717</td>
<td>1,627%</td>
</tr>
<tr>
<td>University of Southern Queensland</td>
<td>18,025</td>
<td>17,884</td>
<td>-1%</td>
</tr>
<tr>
<td>Swinburne University of Technology</td>
<td>104</td>
<td>17,430</td>
<td>16,660%</td>
</tr>
<tr>
<td>Deakin University</td>
<td>9,910</td>
<td>15,037</td>
<td>52%</td>
</tr>
<tr>
<td>Curtin University</td>
<td>3,400</td>
<td>7,961</td>
<td>134%</td>
</tr>
<tr>
<td>CQUniversity</td>
<td>7,457</td>
<td>7,276</td>
<td>-2%</td>
</tr>
<tr>
<td>Southern Cross University</td>
<td>5,225</td>
<td>6,832</td>
<td>31%</td>
</tr>
<tr>
<td>Edith Cowan University</td>
<td>3,235</td>
<td>6,477</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: UCube Higher Education Stats – 26 Aug 2018

### Not your traditional lecture theatre!

**UTS Powerhouse Museum**

In 2017, UTS agreed to lease one of the largest exhibition spaces in Sydney from the Museum of Applied Arts and Sciences (MAAS). The hall, located within the Powerhouse Museum, has been purpose-designed by academics, for academics to create a ‘Collaborative Theatre’ that can be used by up to 400 university students.

The collaborative classroom is used by a range of faculties for classes, including: marketing, health, accounting, life sciences and communications. According to Professor Shirley Alexander, UTS is already constructing a second building that promises to be even more innovative: “There will be no obvious front to the room, but multiple group presentation stations enabling the academic to move between groups and encouraging a more collaborative and student-focused experience for large class sizes”.

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² GFA – Gross Floor Area, EFTSL – Equivalent full time student load
Increased pressure for industry collaboration

With students increasingly seeking to maximise employability through their higher education choices – and with industry internships becoming mandatory for some tertiary education programs – universities are actively developing industry partnerships based on co-locating with companies.

Future campus requirements

Most Australian universities are already planning, participating or delivering campus strategies where university is not the only use, acting as anchor institutions for:

- Innovation districts – Universities are becoming founding members of new development precincts that drive industry collaboration and partnerships.
- Innovation ecosystems – Universities are partnering with development consortiums to create innovation ecosystems that place the highest calibre researcher, industry, government, higher-degree students and other elite thinkers in a single purpose-built precinct. It is a new model for collaborative innovation within the STEM disciplines.

Case study

EY helped a G08 university to understand the characteristics of an Innovation Precinct by researching global case studies. Of particular focus was the scale of the facilities, funding and tenure models and the extent to which they integrate with industry.

How universities benefit from closer collaboration with industry

- Stimulus for research programs
- Fosters high-trust environments and personal connections leading to longer-term relationships
- Integrated learning opportunities for students
- Entrepreneurial community for commercialisation that provides access to expertise
- Funding to carry out research

Source: Department of Industry, Innovation and Science – University Precincts issues paper May 2017

MPID aims at developing an events program and innovative measures that can bring park members and the community together.

MPID is focusing on the development of collision, collaboration and events spaces along with start-up incubators and follow on small business space to anchor the innovation community.

Source: Macquarie University and MPID websites 2018

Macquarie Park Innovation District (Macquarie University)

Created in 2015 by 7 founding partners – AMP Capital, NAB, Optus, Abbott, Johnson & Johnson, Konica Minolta and Macquarie University.

A globally recognised ecosystem creating innovative solutions benefiting the local and international community.

Source: Macquarie University and MPID websites 2018

Carlton Connect Initiative (University of Melbourne)

Works with the community to query, test and sample possible solutions to complex problems such as affordable housing, water scarcity and the transition to renewable energy.

Carlton Connect aims to cultivate an innovation ecosystem for the translation of research and the creation of new industries and careers.

Source: Urbis, Carlton Connect Initiative – 700 Swanston Street, Carlton, Town Planning Report October 2017

Carlton Connect Initiative (University of Melbourne)

Anchored by the University of Melbourne in the inner-city suburb of Parkville.

Innovation through co-location and collaboration.

Partnerships between different sectors and disciplines are formed to address global challenges that may not be solved by one sector alone.
Changing demand from employers

Increasing industry demand for a highly educated workforce is making higher education requirements more complex and specialist. Employers are increasingly supplementing employee education through in-house training. Some organisations have removed degree classification thresholds altogether, in lieu of competency-based assessments. Others have evolved into educational providers themselves, offering internal professional development and vocational training in house. Growth in private online learning is also increasing.

Future campus requirements

These trends also point to less academic real estate on the university campus, challenging the need for a faculty based campus. Instead, we will see the rise of:

- **Employer-targeted digital offerings** — As another form of off-campus digital growth.
- **Mobile learning models** — Universities seeking closer alignment with industry should consider the viability of mobile in the workplace supported specialist learning models.

Is the university “consumer” of the future a student or the employer?
Growth in international recruitment

Australian universities are increasingly relying on international students to remain profitable, pouring marketing dollars into capturing a higher proportion of the international student market. In 2016, this cohort accounted for 21% or $6.25bn of the sector’s total revenue.³

In good news, international recruitment numbers continue to grow exponentially, quadrupling to reach five million between 1990 and 2014. By 2025 the OECD expects this number to hit eight million.

However, increased global competition, particularly from emerging international student destinations, such as China, South Korea and Malaysia, is starting to bite. Cost will be an increasing factor as Australian university fees rise while those in developing countries fall. Australia will also have to compete against new and innovative campus environments purpose designed with greater levels of access and multi-use retail precincts.

Australian universities are under significant pressure to transform existing campus environments to allow them to better compete on a global scale; however, most traditional campuses are encumbered by aging infrastructure and obsolete buildings, increasing both the cost and complexity to achieve meaningful change.

Future campus requirements

To continue to attract and grow numbers of international students, universities may need to rethink their Purpose Built Student Accommodation (PBSA), offering choices that are appealing and affordable for international students.

We anticipate an increase in mixed use campuses – incorporating teaching, PBSA, retail and industry to form a more attractive living base for international students.

Where and what a university’s role should be in future campuses transformation is also in question. The complexity and range of new asset classes within a “mixed-use campus” is already challenging traditional university property team procurement, capabilities and operational models.

Universities need to become more innovative in both structuring and funding future campus models to achieve the rate of transformation required to re-position campuses on a meaningful scale.

In most cases, this will require leveraging private sector investment onto campus; however, where and how to engage with the private sector needs to be carefully considered in the context of future control, flexibility and risk. These types of transactions will become more common place in Australia and have already fuelled strong interest from a range of specialist investors targeting PBSA or education-linked assets.

Private sector partnering is not a new concept in facilitating campus development; however, universities need to consider the long term implications and impacts when negotiating agreements or exclusivity on campus real estate.

Over the last few years, EY has supported various Australian universities to either re-negotiate or unwind historic transaction agreements that no longer deliver their anticipated objectives or now constrain future campus strategies.

In our experience, many issues could have been resolved with better up-front planning or documentation of the original agreements. Some institutions entered into agreements without fully contemplating their long-term impact and future implications on campus control.

Delivering an innovative “mixed-use campus” will present even more risk, complexity and margin for long-term issues. Universities need to develop their thinking around investment decisions and should not underestimate the importance of careful planning, specialist advice and the ability to clearly define and quantify the benefits and risks associated with different procurement options.

3. TEQSA, 2016
Campus of the future

As universities respond to the above trends, their estate and infrastructure strategies will become more commercially focused. When centralised campus sizes shrink and the demand for new buildings and assets grows, the traditional campus model of direct ownership could become redundant. Instead, we will see ...

Case study

A Victorian university is redeveloping its campus to include student accommodation, residential apartments, retail, commercial, a hotel and an iconic building. EY teams assisted with:

- An extensive market sounding process
- Demand analysis, including Highest and Best use analysis
- Detailed financial modelling to determine viability
- Procurement and governance structure recommendations

1 Right sizing and recycling existing property assets

While most are technically not for profits, the large, research-intensive Group of Eight (GO8) had a combined operating income in FY17 of around $14 billion. And many of these and other universities own or control large tranches of surplus or under-utilised land.

We calculate the sector has up to $10 billion of land which can be leveraged for redevelopment of complementary land uses. Divested, leased or developed in the right way, under-utilised land and buildings could unlock substantial cost savings to recycle back into core activities or to support the procurement or lease of different infrastructure to support new campus models.

The GO8 spent approximately $1.4 billion on capital expenditure projects in 2017.

However, this process is likely to be a long and hard one. Universities must solve the issue of where to house their large administrative functions, perhaps using automation or outsourcing to reduce the on-campus footprint. They must also overcome:

- Physical or planning constraints that will impact the best use alternatives.
- Potential opposition from internal and external stakeholders.
- Lack of understanding and clarity over physical space requirements.

We are already seeing increased technology investment to help universities overcome some of these initial hurdles. Universities are increasingly using smart building technology and data collection to provide greater insight into trends and usage patterns on campus. Monitoring occupancy rates, supported by the use of sensors, gives management teams real-time visibility over student movements, and asset utilisation — and can identify campus “dead-spots”.

Every campus in Australia has its own set of unique constraints and opportunities. Careful masterplanning is paramount to ensure the right infrastructure, mix and quality of assets are being delivered in the best locations. To this end, it may be prudent for universities to invest in technology first to collect and analyse data, rather than invest blindly in the latest campus design trend.
Endowment land – use it or lose it ...

A number of Australian universities were established on large tranches of endowment land. Many of these precincts are crown land and were transferred with restricted uses for higher education. Endowment precincts generally comprise significant land holdings that include expansion land, predicated on the basis more land was required to support future growth in student numbers. However, if universities drive growth in digital learning and new delivery models, will they no longer need the same amount of land around their central campuses?

At the same time, universities may find themselves under pressure to unlock any under-utilised assets as land around our major cities becomes more scarce. This will be another incentive for universities to come up with recycling or divestment strategies that demonstrate how surplus land will be used to deliver on education or other social policy objectives.

### Australian university assets ($B)

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<tbody>
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<td>35</td>
<td>40</td>
<td>42</td>
<td>44</td>
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<td>45</td>
</tr>
<tr>
<td>Land</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Buildings</td>
<td>20</td>
<td>22</td>
<td>22</td>
<td>24</td>
<td>26</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Library</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other property plant and equipment</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: TEQSA – Financial Metric’s on Australia’s Higher Education Sector Ed 1,2,3
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2 Developing industry co-locations

Increasingly, precincts are blurring the boundaries between education, industry and research. The drive to form innovation ecosystems is challenging the range of traditional land uses on campus by introducing commercial, retail and other forms of aligned infrastructure.

But when universities and industry are co-located:
• Who is responsible for the upkeep of the common areas?
• How do you ensure universities are getting value for money if they are underpinning a precinct?
• What are the principles to ensure an equitable deal?
• Who benefits from the economic stimulus?

Precinct development will require real estate teams to consider tenure and control. Traditional models have been based on university ownership, but that may no longer be a sustainable model. Will ground leases or BOOT*-like structures present a more viable solution?

More detailed commercial frameworks around precinct development will be needed to assist Councils and Senates in making clear decisions and understand the risks, benefits and rationale for progressing.

3 Acquiring more flexible buildings and infrastructure

As universities seek increased utilisation, with uncertainty around long-term floor space requirements, they will need to lease or construct more flexible buildings and infrastructure. This may involve increasing their use of leasehold or satellite locations. Such leasing models will permit longer-term flexibility allowing universities to better react to change and transfer the requirement for initial capital investment to the landlord.

Universities will also need to engage in greater collaboration with industry and government to investigate alternative, equitable tenure models and flexible built form design to suit a range of changing uses.

Case study

EY teams were engaged by an Australian State Government to provide business case services for the construction of a health and medical research institute. The work involved undertaking stakeholder consultation with universities, research entities and other State departments to achieve alignment on vision, options and desired participation. EY derived benchmarking information for facility size, governance and business models and completed financial and economic modelling to test the financial impacts on a whole of life basis.

4. BOOT — Build Own Operate Transfer
How will real estate portfolio management change?

Most campuses already have the potential to unlock revenue, development opportunities and efficiencies by using their real estate portfolios to provide flexible tenure, built form and location.

If universities are recycling assets to fund the procurement of new and different types of buildings and assets, this will require:

- Increased transparency around costs and building utilisation
- A holistic asset management approach underpinned by data analytics
- Different property capabilities and internal policies to manage risk and investment decisions
- A robust decision making framework or prescribed investment hurdle rate to support the decision making process
- New portfolio strategies to maximise return on capital

Questions for leaders

1. How will changes in learning delivery and digital impact the future campus footprint? Will future growth require expansion or consolidation of the core campus and how will change impact at each faculty level?
2. Can additional value be released from development and surplus land assets to provide alternative revenue streams?
3. How does the university make transparent investment decisions over its property portfolio? Is there a clear investment and risk policy to guide development of new opportunities and proposals?
4. What are the university’s preferences regarding future campus governance and operations, procurement and funding sources?
5. What real estate-led opportunities exist to facilitate or support industry collaboration, partnering, innovation and research?
6. How does real estate support the changing requirements of student types, research and university staff? Who should provide what facilities?
7. What is the university strategy around place activation, campus governance and operations, student accommodation, or innovation and collaboration?
EY’s specialist Real Estate Advisory Services

- EY teams are working with a range of universities, industries and government agencies to identify and unlock opportunities through pro-active real estate strategy and initiatives.
- To discuss your options for funding the campus of the future, contact:

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