

University of the future

A thousand year old
industry on the cusp of
profound change



Over the next 10-15 years, the current public university model in Australia will prove unviable in all but a few cases



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Introduction and executive summary

The current Australian university model – a broad-based teaching and research institution, with a large base of assets and back office – will prove unviable in all but a few cases.

Ernst & Young's view is that the higher education sector is undergoing a fundamental transformation in terms of its role in society, mode of operation, and economic structure and value. To explore these themes and future directions, we have conducted an industry-wide study of the main forces impacting the higher education industry globally and locally, and the opportunities, challenges and implications for Australian universities. We conducted a mix of primary and secondary research, including interviews with more than 40 leaders from public universities, private universities, policy makers and sector representative groups. Our interviewees included representatives from more than 20 universities, including 15 Vice-Chancellors. The topic attracted immense interest around Australia.

Our primary hypothesis is that the dominant university model in Australia – a broad-based teaching and research institution, supported by a large asset base and a large, predominantly in-house back office – will prove unviable in all but a few cases over the next 10-15 years. At a minimum, incumbent universities will need to significantly streamline their operations and asset base, at the same time as incorporating new teaching and learning delivery mechanisms, a diffusion of channels to market, and stakeholder expectations for increased impact.

At its extreme, private universities and possibly some incumbent public universities will create new products and markets that merge parts of the education sector with other sectors, such as media, technology, innovation, and venture capital. Exciting times are ahead – and challenges too.

We have summarised the drivers of change of this brave new world into five key trends:

- 1. Democratisation of knowledge and access** – The massive increase in the availability of 'knowledge' online and the mass expansion of access to university education in developed and developing markets means a fundamental change in the role of universities as originators and keepers of knowledge.
- 2. Contestability of markets and funding** – Competition for students, in Australia and abroad, is reaching new levels of intensity, at the same time as governments globally face tight budgetary environments. Universities will need to compete for students and government funds as never before.

- 3. Digital technologies** – Digital technologies have transformed media, retail, entertainment and many other industries – higher education is next. Campuses will remain, but digital technologies will transform the way education is delivered and accessed, and the way 'value' is created by higher education providers, public and private alike.
- 4. Global mobility** – Global mobility will grow for students, academics, and university brands. This will not only intensify competition, but also create opportunities for much deeper global partnerships and broader access to student and academic talent.
- 5. Integration with industry** – Universities will need to build significantly deeper relationships with industry in the decade ahead – to differentiate teaching and learning programs, support the funding and application of research, and reinforce the role of universities as drivers of innovation and growth.

The university sector is critical to Australia's future. Universities educate our leaders and entrepreneurs of the future, create new ideas and knowledge, and earn much needed export income. Universities provide opportunities for students of all backgrounds to increase standards of living for themselves and future generations. But, to succeed, universities will need to forge new business models that are dynamic, modern and fit for the decades ahead.

We see university business models becoming more diverse, and anticipate three broad lines of evolution.

- 1. 'Streamlined Status Quo'** – Some established universities will continue to operate as broad-based teaching and research institutions, but will progressively transform the way they deliver their services and administer their organisations – with major implications for the way they engage with students, government, industry stakeholders, TAFEs, secondary schools, and the community.
- 2. 'Niche Dominators'** – Some established universities and new entrants will fundamentally reshape and refine the range of services and markets they operate in, targeting particular 'customer' segments with tailored education, research and related services – with a concurrent shift in the business model, organisation and operations.

A person with dark hair, wearing a dark jacket, is seen from the side, looking through binoculars. The background is a bright, clear blue sky with some light clouds. The person's face is partially obscured by the binoculars.

3. 'Transformers' – Private providers and new entrants will carve out new positions in the 'traditional' sector and also create new market spaces that merge parts of the higher education sector with other sectors, such as media, technology, innovation, venture capital and the like. This will create new markets, new segments and new sources of economic value. Incumbent universities that partner with the right new entrants will create new lines of business that deliver much needed incremental revenue to invest in the core business – internationally competitive teaching and research.

Faced with this dynamic industry landscape, Australian universities should critically assess the viability of their institution's current business model, develop a vision of what a future model might look like, and develop a broad transition plan. Deliberations on future models need to include which customer segments to focus on, what 'products' or services they need, optimal channels to market, and the ideal role of the university within the education and research value chains. Support functions will need to be streamlined and in some cases fundamentally reconfigured. Regardless of the path chosen, universities will need to align new directions to their institution's core purpose and values.

This document describes our study, key findings and recommended responses. It covers:

- ▶ Drivers of change
- ▶ Evolution of the university model
- ▶ Implications for public universities, policy makers and the private sector
- ▶ How to play in the future – Ernst & Young's framework for assessing and designing a model for the future
- ▶ Ernst & Young team and methodology

We hope the paper provides food for thought as universities chart their journey towards a new future.

A handwritten signature in black ink, appearing to read 'Justin Bokor', is written in a cursive style.

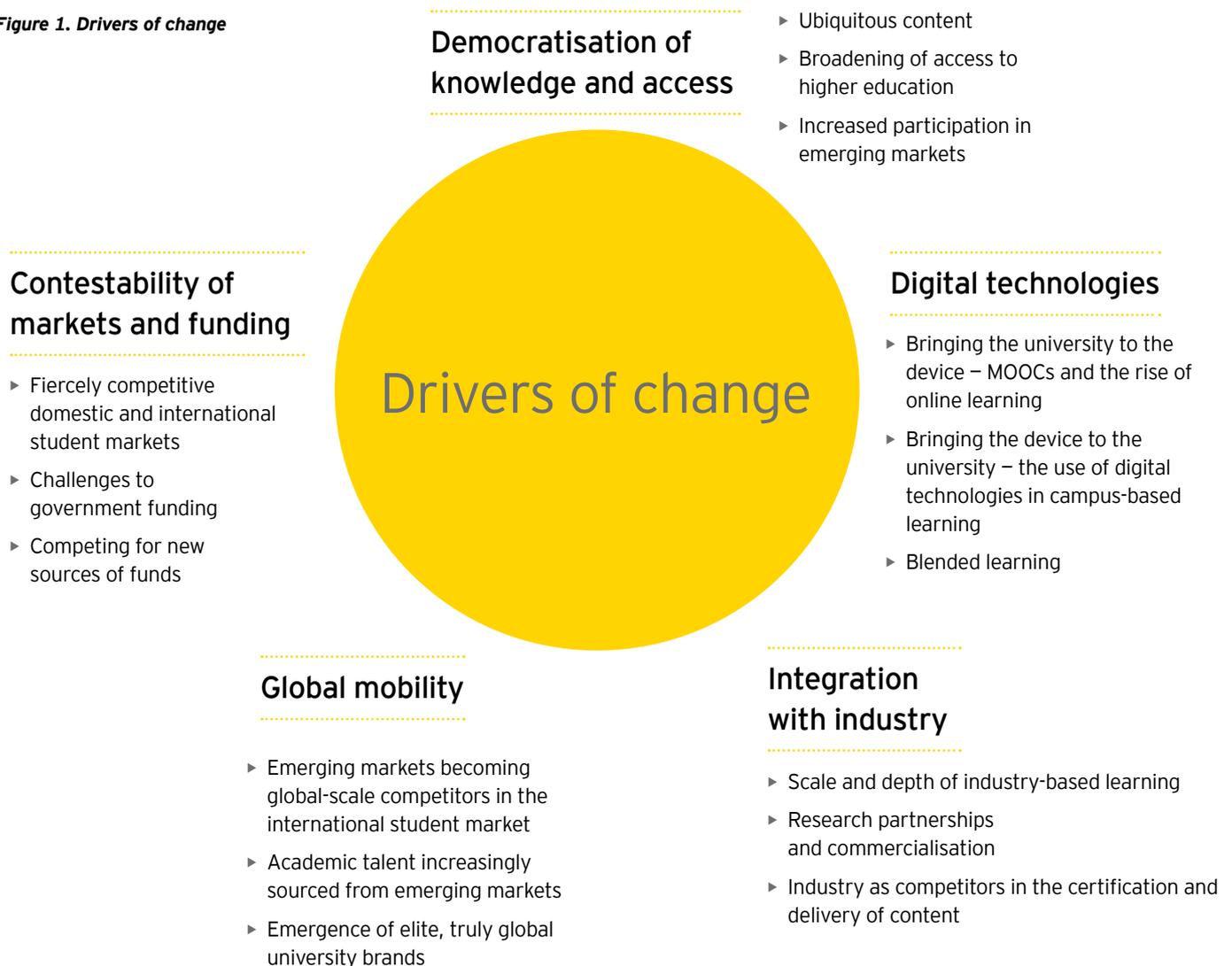
Justin Bokor
Ernst & Young

Drivers of change

Five mega-trends will transform the higher education sector.

Our research and industry discussions highlighted a number of major forces impacting the higher education sector in Australia and internationally. These forces coalesced around five key drivers of change. The first section of this paper explores each of the five drivers and their likely impact in the decade ahead.

Figure 1. Drivers of change



Democratisation of knowledge and access will drive a global ‘education revolution’ of a scale never before seen, creating both new opportunities and new sources of competition.

“Teaching methods have to change. We can’t rely on delivering content anymore – it’s all about contextualisation, ways of thinking, and the student experience.”

University Provost

1. Democratisation of knowledge and access

Traditionally, universities held the key to knowledge, in both a physical and philosophical sense. University libraries, faculty domains and research institutes were where knowledge was created, stored and shared. The staff working in those domains typically held a privileged status as originators and keepers of knowledge. Now knowledge is open to anyone globally with a device and connectivity – not just facts and figures, but also analysis, interpretation, and curation of knowledge.

Access to universities has traditionally been dominated by a modest proportion of society in developed markets – 20-30% of post-secondary students – and a very narrow proportion of society in emerging markets, typically the elite.

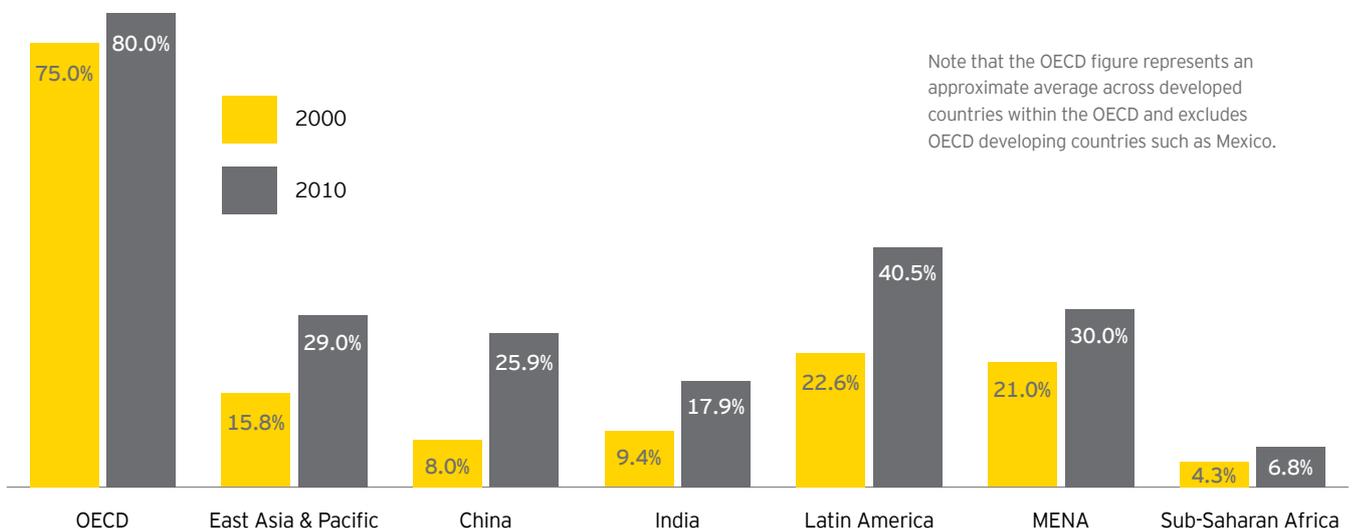
Today, access is expanding both in developed markets, such as Australia, and even more fundamentally in emerging markets. China’s tertiary

education participation rate more than trebled from 8.0% to 25.9% in the first decade of this century, and is likely to double again in the next 10-15 years¹.

Participation rates are growing rapidly in a host of other economies and regions: Latin America, ASEAN, the Middle East and North Africa. Participation rates are also now growing steadily in sub-Saharan Africa, after decades of negligible growth.

This expansion of access will drive a global ‘education revolution’ of an unprecedented scale, transforming societies by creating opportunities for millions of people and their families to increase their standards of living. For universities, this will drive new approaches to teaching and learning, create opportunities for entry to new markets and new global partnerships, stimulate new distribution approaches – such as low-cost distribution in rural areas – and also create new sources of competition.

Figure 2: Tertiary education participation rates (Proportion of 18-22 years olds in post secondary education)



Source: World Bank, Ernst & Young analysis. MENA – Middle East & North Africa; OECD – Organisation for Economic Co-operation & Development

¹ See, for example, Outline of China’s National Plan for Medium and Long-term Education Reform and Development (2010 – 2020), China Ministry of Education (www.moe.gov.cn).

Drivers of change

Contestability of markets and funding will deepen both in Australia and internationally, with any growth in funding coming from highly competitive, non-government sources.

“We will come under increased pressure on Government funding, whichever way you look at it.”

Head of university representative group

2. Contestability of markets and funding

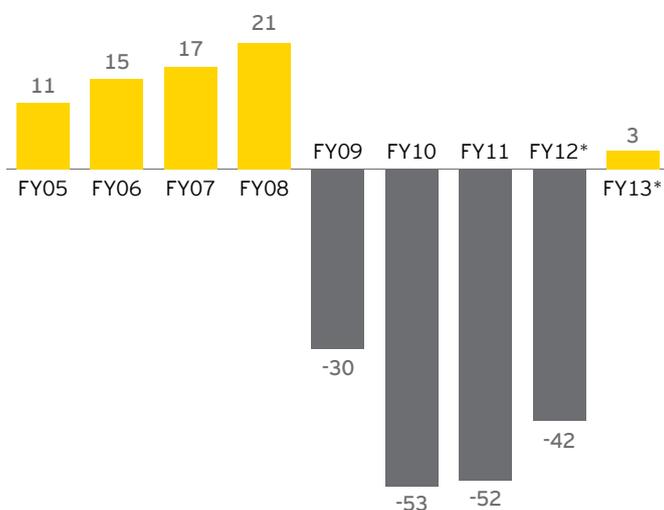
The introduction of a demand-driven funding model in Australia in 2012 has driven whole new levels of competition. A number of universities that had previously felt secure in their market shares found themselves confronted by losses in share of 5-10% or more as 2011 first preferences and 2012 enrolment data started to come through. In Victoria, for example, four universities lost 3.5% market share or more – see Figure 4 below.

While future Australian governments may seek to limit the fiscal implications of growth in enrolments, the deepening of market contestability is unlikely to be reversed, either in Australia or internationally. The genie is well and truly out of the bottle.

Contestability of funding for teaching and research will likewise deepen, both in Australia and internationally. Mining boom Mark I drove the 2006-07 and 2007-08 Australian budget surpluses that filled the coffers of EIF². However, the fiscal boost of mining boom Mark II appears over before it even began. The government faces a mighty task to return the budget to surplus, and both sides of politics have spending commitments that will take every spare dollar and more well into the next political cycle.

Universities in Australia will need to prepare for an environment where every dollar of government funding is contestable and any growth in funding comes from non-government sources – students, industry, philanthropists, and global collaborations – that are all fiercely competitive.

Figure 3: Australian government fiscal surplus/deficit, Financial Year (FY) 2005 to 2013
(A\$ billion)

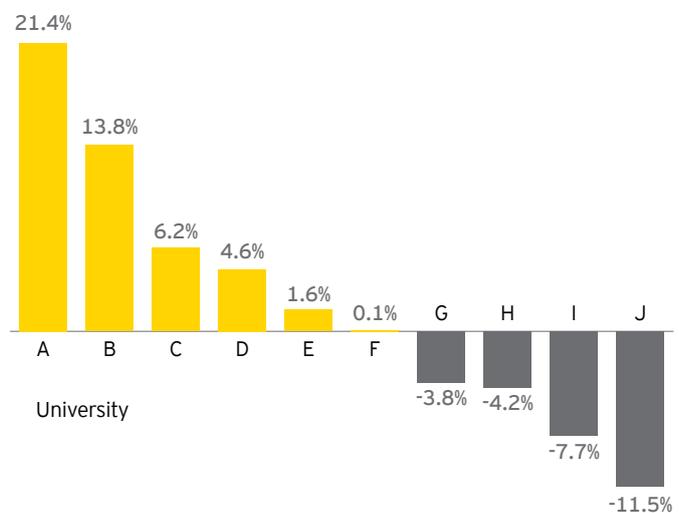


Source: Based on Treasury data – Commonwealth of Australia Budget Papers 2006-07 to 2012-13.

* Figures are estimates from the May 2012 paper

Figure 4: Market competition

Percentage change in market share of first preferences 2011 vs 2010 – Victorian market (universities de-identified)



Source: Ernst & Young analysis of market data.

Digital technologies will transform the way education is delivered, supported and accessed, and the way value is created in higher education and related industries.

“Our major competitor in ten years time will be Google... if we’re still alive!”

University Vice-Chancellor

3. Digital technologies

Digital technologies and innovation have disrupted all manner of established industries – media, retail, entertainment and many others. While online education has been around since the 1990s, it has been in the last 2-3 years where the pace and disruptiveness of change has really accelerated.

Digital technologies will not cause the disappearance of the campus-based university. Campuses will still exist as places of teaching and learning, research, community engagement, and varied forms of student experience – assuming universities can deliver a rich, on-campus experience. But digital technologies will transform the way education is delivered and supported, for example through applications that enable real-time student feedback, and the way education is accessed in remote and regional areas – both in the developed and developing world.

Digital technologies will also fundamentally transform the way value is created within higher education and related industries. For example, new technologies will enable public and private providers to specialise in parts of the value chain – content generation, content aggregation, mass distribution, certification, commercialisation and so on.

New technologies will enable media companies to enter the university sector, either in partnership with incumbents, or potentially in their own right. The so-called Massive Open Online Courses (MOOCs) are an early stage example of the search for new models. Some of these models will decline and fail, others will create very substantial economic value. Winners are likely to be a mix of new, pure play online businesses and traditional businesses with powerful online models and capability.



Drivers of change

Global mobility will continue to grow for students, academic talent and university brands, with the likely emergence of a small number of elite, truly global university brands.

“There will be 15-20 independent, global brands ... the rest will be playing for the silver medal.”

University Vice-President

4. Global mobility

Global mobility will continue to grow for students, academic talent, and increasingly for university brands. International students have been the lifeblood of the Australian higher education industry over the last 10-15 years. The international student market is growing rapidly (global growth of 6.6% per annum over the last decade), but will fundamentally change in structure in the coming decade and beyond, as traditional source markets – China, Malaysia, South Korea and others – increasingly become global-scale destinations for international students.

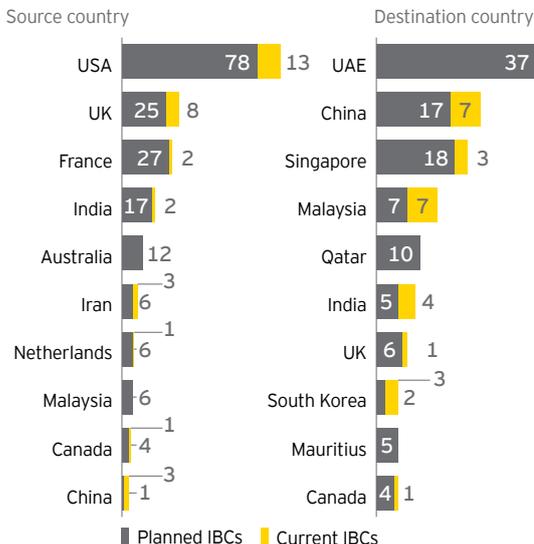
Likewise, the sources of academic talent will become more diffuse as academics from emerging markets become increasingly mobile and in demand, providing a growing source of talent for universities in both developed and developing economies alike.

Global mobility of academic brands is a newer phenomenon, but is also growing in importance. ‘MOOC-based’ distribution of content by the likes of Harvard, MIT and others is creating a global brand impact, if not revenue at this stage. International branch campuses (IBCs) are also growing: there are 200 globally now, with 38 more planned in the next two years.

The likely outcome over the next 10-15 years is the emergence of a small number of elite, truly global university ‘brands’. These global brands of the future will include some of the ‘usual suspects’ – a subset of Ivy League and Oxbridge institutions – as well as a number of elite institutions from China. China’s ‘C9’ institutions have the resources, government support and intent to achieve global elite status. This will drive new partnership opportunities and new sources of competition for Australian universities.

Figure 5: Top 10 source and destination countries for international branch campuses in 2011

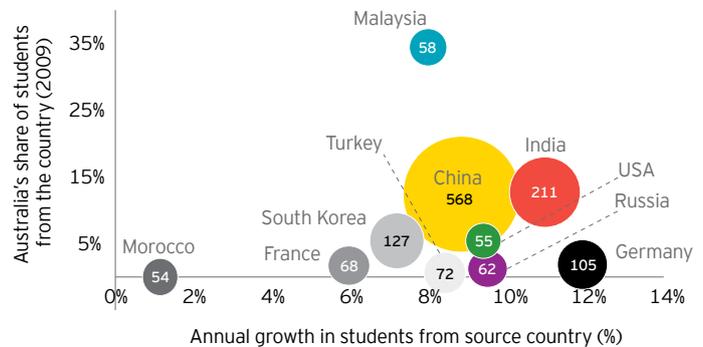
(total established IBCs = 200; total planned IBCs = 38)



Source: International branch campuses – data and developments, The Observatory on Borderless Higher Education, January 2012

Figure 6: Top 10 source countries for tertiary education students

(2009 figures and comparison to 2005)



Note: Size of bubble denotes number of students studying abroad in 2009 ('000)

Source: Education at a Glance 2011, OECD Indicators

The relationship between the higher education sector and industry will deepen – industry will be a key partner, and also a competitor in specialist professional programs.

“The big game will be co-investment with the private sector.”

Head of university representative group

5. Integration with industry

The relationship between industry and the higher education sector is changing and deepening. Industry plays multiple roles: as customer and partner of higher education institutions and, increasingly, as a competitor. For universities to survive and thrive, they will need to build significantly deeper relationships with industry in the coming decade. Scale and depth of industry based learning and internships, for example, will become increasingly critical as a source of competitive advantage for those universities who have the industry partnerships and pedagogy to do it well.

Research higher degree programs and applied research will increasingly be run in partnership with industry – like for example the Australian Technology Network of Universities’ new industry-based PhD program³, and the mining industry research partnerships

established by the University of Queensland⁴ and the University of Western Australia⁵.

Research commercialisation will go from being a fringe activity to being a core source of funding for many universities’ research programs. Already, venture capitalists, industry, and entrepreneurs are increasingly being brought together to commercialise university research; for example, the Knowledge and Innovation Communities being established by the European Union⁶.

Finally, industry will increasingly compete with universities in a number of specialist professional programs. Accounting industry bodies already provide a range of specialised post-graduate programs (CPA, CA, CFA etc). Other industry groups, for example engineering associations and pharmacy guilds, may play an increased role as certifiers and deliverers of content.

- ▶ **5-year plan...**
- ▶ **€700** million budget
- ▶ **60** new companies
- ▶ **100** new products
- ▶ **80** patents
- ▶ **3300** graduates

InnoEnergy – Creating the world’s largest innovation factory

Launched in May 2010, the massive European initiative InnoEnergy brings together industry, research centres, universities and business schools – a total of 29 partners – to:

- Deliver post graduate education in the area of sustainable energy, with each program including training in innovation and entrepreneurship
- Develop and launch innovative sustainable energy technologies
- Spin off new enterprises to commercialise InnoEnergy’s new technologies

The intent is to spur innovation and commercial activity in Europe, while at the same time helping to solve global energy problems. InnoEnergy is one of three large-scale, cross-border Knowledge and Innovation Communities established by the EU’s European Institute of Innovation and Technology⁷.

3 ATN Industry Doctoral Training Centre (atn.edu.au/IDTC)

4 Sustainable Minerals Institute (smi.uq.edu.au)

5 Energy and Minerals Institute (emi.uwa.edu.au)

6 See eit.europa.eu/kics

7 KIC InnoEnergy (kic-innoenergy.com)

Drivers of change

These drivers of change will transform the higher education industry landscape, forcing universities to adapt their business models.

“The traditional university model is the analogue of the print newspaper... 15 years max, you’ve got the transformation.”

University Vice-Chancellor

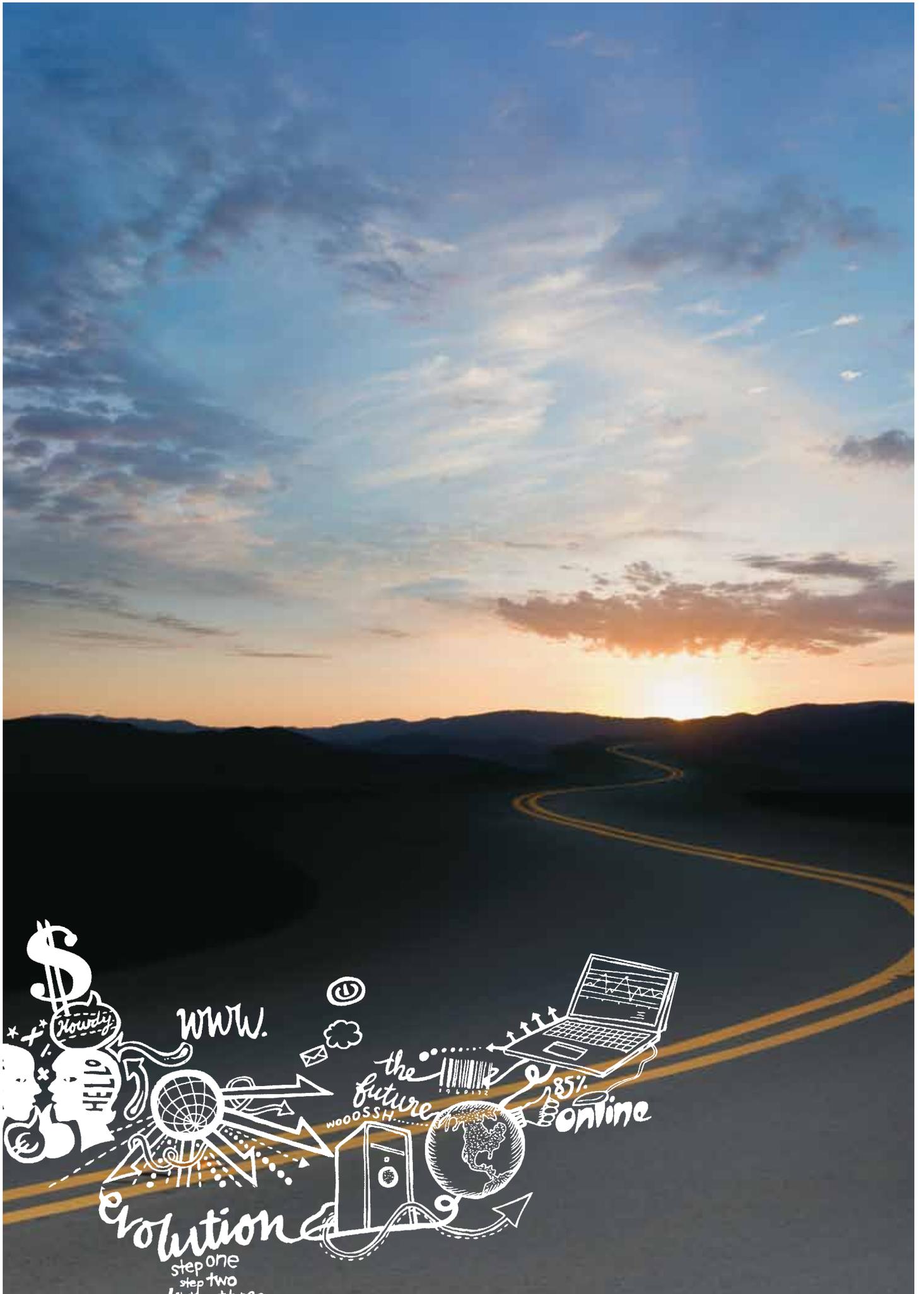
Conclusions

The sum total of these drivers of change will be a significantly different higher education industry landscape 15 years from now. We see the sector developing as follows:

- ▶ Universities will be compelled to create **new, leaner business models** as competition increases for staff, students, funding and partners.
- ▶ Public institutions will increasingly be run **like corporations**, while seeking to **maintain the freedom of inquiry and academic rigour** that their long-term reputation depends on.
- ▶ Private institutions will **exploit profitable market niches**, while others will create new markets and sources of value; for example, by specialising in select parts of the education value chain.
- ▶ Policy makers will seek to maintain steady growth in access to university education. They will search for policy levers and programs that put the higher education sector at the centre of a genuine **knowledge economy integrated into the Asian region**, while inevitably **tightening the public purse strings** for higher education providers.

These changes will force universities to adapt in a number of ways:

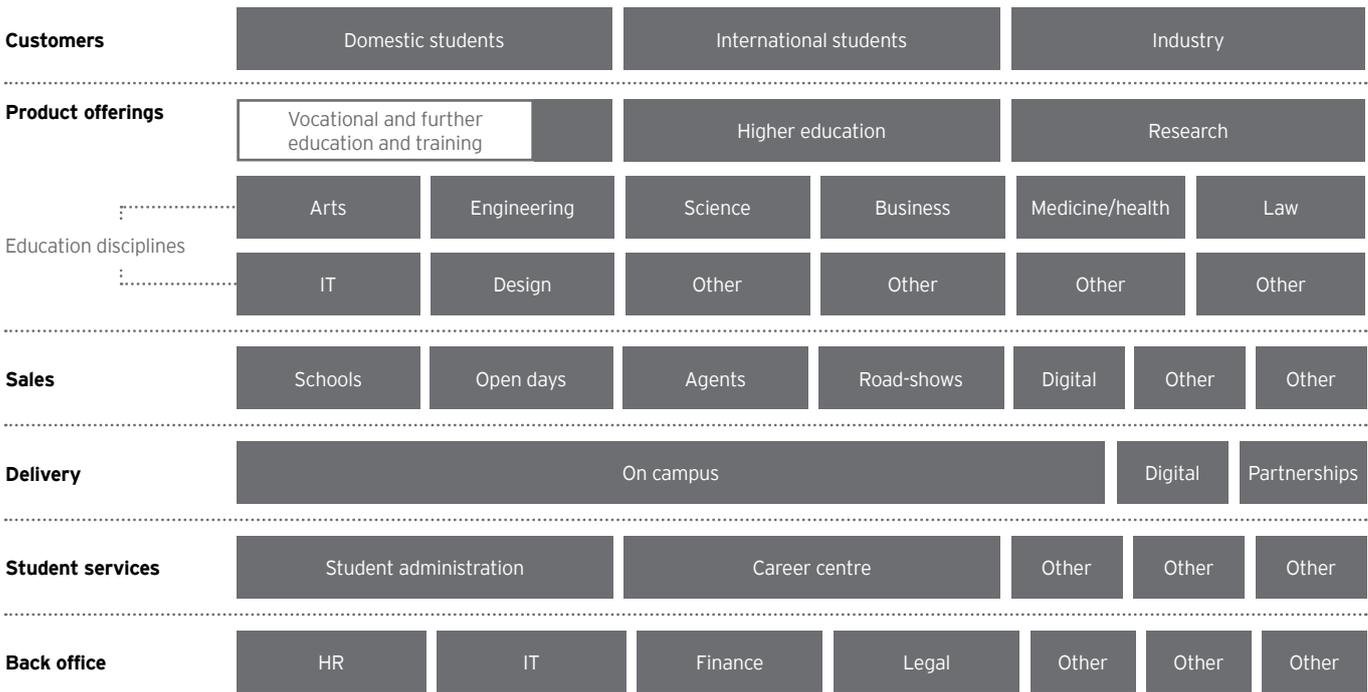
- ▶ **Breadth of programs** – Universities will need to consider whether they can continue to maintain a competitive position – domestically and internationally – across a broad range of programs, or whether to concentrate resources on a smaller range of programs.
- ▶ **Target customers** – Universities will need to have a clear strategy and execution around target student segments and their specific needs and preferences. Today, most universities’ segmentation is broad at best (for example – school leavers, mature age, and international). Universities that do not become more focused on segments will be exposed to competitors with targeted student propositions.
- ▶ **Channels to market** – Universities will need to rethink the role of digital channels and third party partnerships in recruiting students and delivering teaching and research programs.
- ▶ **Back office** – The asset base and university administration will need to be significantly leaner than it is today. Most universities at present have significantly more support staff than academic staff – this ratio will have to change.



Evolution of the university model – current state...

The dominant university model in Australia is a broad-based teaching and research institution, supported by a large asset base and a large, predominantly in-house back office.

Figure 7: Current model – established universities



Source: Ernst & Young

Legend Current area of focus

In the current model most Australian universities:

- ▶ Serve a broad mix of student segments – school leavers, mature age students, and international students.
- ▶ Offer a broad range of disciplines – health sciences, arts, science, technology, business, economics, education, law and more.
- ▶ Deliver teaching and learning programs primarily on campus in Australia, supplemented by various online offerings, franchise arrangements, twinning partnerships and international branch campuses.

- ▶ Deliver and manage the vast bulk of student services and back-office functions (HR, IT, payroll, finance, procurement and so on) in-house.

There are, of course, exceptions to this broadly defined current model. For example, some of the technology universities have progressively oriented their institutions around a focused set of disciplines or industry domains. But, at the moment, these institutions are the exception, rather than the rule.

...and case for change

We expect a significant transformation of university business models in the coming decade and beyond, despite the historically slow pace of change in the sector.

“Universities face their biggest challenge in 800 years.”

University Vice-Chancellor

Given the forces of change impacting the higher education sector, we expect a significant transformation of university business models in the coming decade and beyond. However, the industry leaders we spoke to were divided in their views on the extent of change that Australian universities will undergo.

A number of industry leaders felt that Australian universities, especially public universities, will continue with broadly similar models to those of today. They cited the slow pace of change: “universities haven’t changed much in a thousand years” was a common refrain. They also believe that policy and funding uncertainties make it difficult for universities to adapt their business models with confidence about the likely outcomes. Several university executives also highlighted the new regulatory regime being implemented by TEQSA as a potential brake on the speed of change.

Others saw change as inevitable, citing drivers of change similar to those described in this paper, as well as the economically fragile state of many incumbent institutions in the sector.

We side with the latter. We cite the Darwinian force of the market and innovation. The printing industry prospered for the better part of six centuries after the invention of the printing press – but there is not a single part of that industry that has not been disrupted in the last decade. Longevity is no guarantee of permanence.

At a minimum, incumbent higher education institutions will need to significantly streamline their operations and asset base, at the same time as incorporating new teaching and learning delivery mechanisms and a diffusion of channels to market, and adapting to stakeholder expectations of increased impact and 24/7 engagement.

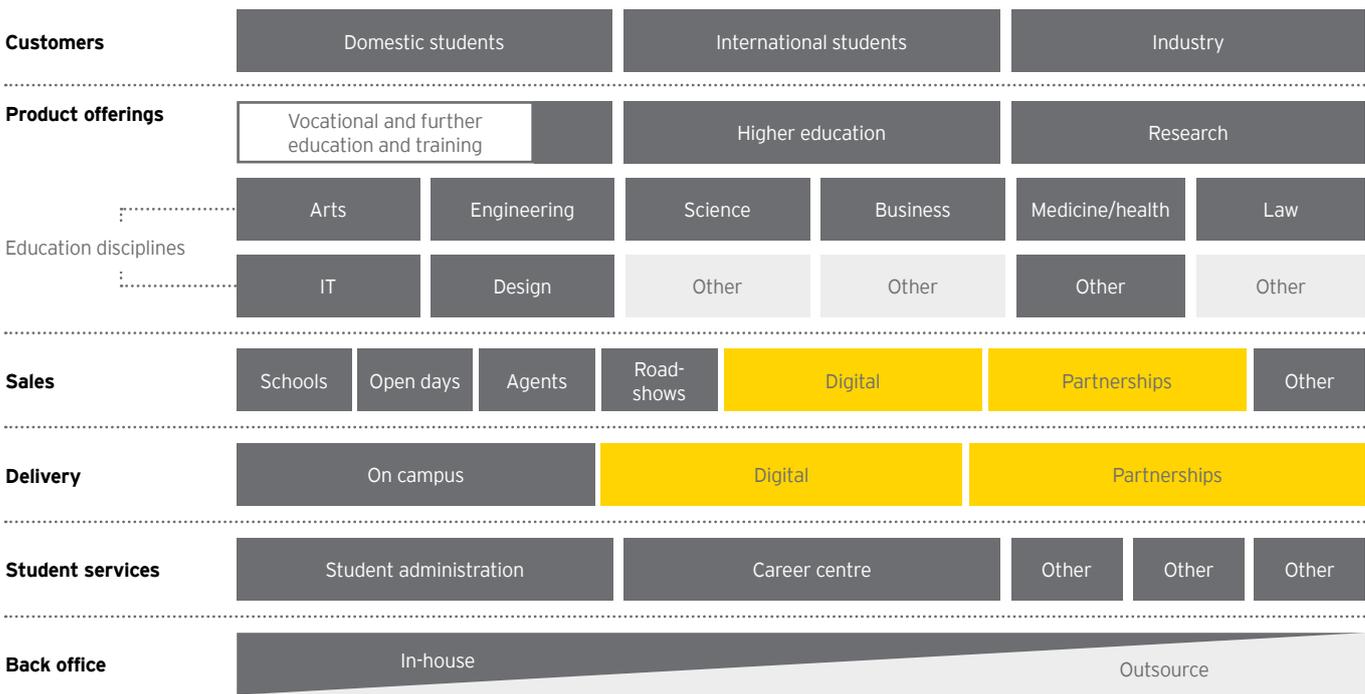
The following section explores how the current model might evolve in the following decade and beyond.

Where does your institution sit in the debate on the extent of change... will ‘steady as she goes’ work for your institution?

Evolution of the university model – ‘Streamlined Status Quo’

Some universities will continue to operate as broad-based teaching and research institutions, but will transform the way they deliver their services and administer their organisations.

Figure 8: Potential future model – ‘Streamlined Status Quo’



Source: Ernst & Young

- Legend
- Current area of focus
 - Area de-scoped or reduced in focus in future models
 - Increased area of focus in future models

In this model, the university:

- ▶ Continues to serve a broad mix of student segments.
- ▶ Continues to offer a broad range of disciplines, but discontinues a small number of sub-scale/unprofitable disciplines (or merges those disciplines with a ‘competitor institution’ to achieve scale) – providing the resources required to maintain international competitiveness in other disciplines.
- ▶ Invests heavily in digital sales and delivery channels, both ‘pure play’ digital channels and blended models.
- ▶ Forms a range of sales and delivery partnerships with public and private higher education providers, TAFEs, secondary schools, industry partners and other institutions that can open up new markets – or more efficiently access and serve existing markets.
- ▶ Outsources some back-office functions to realise lower operating costs, and/or drives efficiencies through shared services arrangements with like-minded institutions.

Universities have ample scope to increase the efficiency of their organisations, including reducing the ratio of support staff to academic staff and using assets more efficiently.

“We’re not businesses... but we need to be run in a business-like way.”

University Vice-President

Where does your institution fit in this chart?
Is your institution’s ratio of support staff to academic staff sustainable?

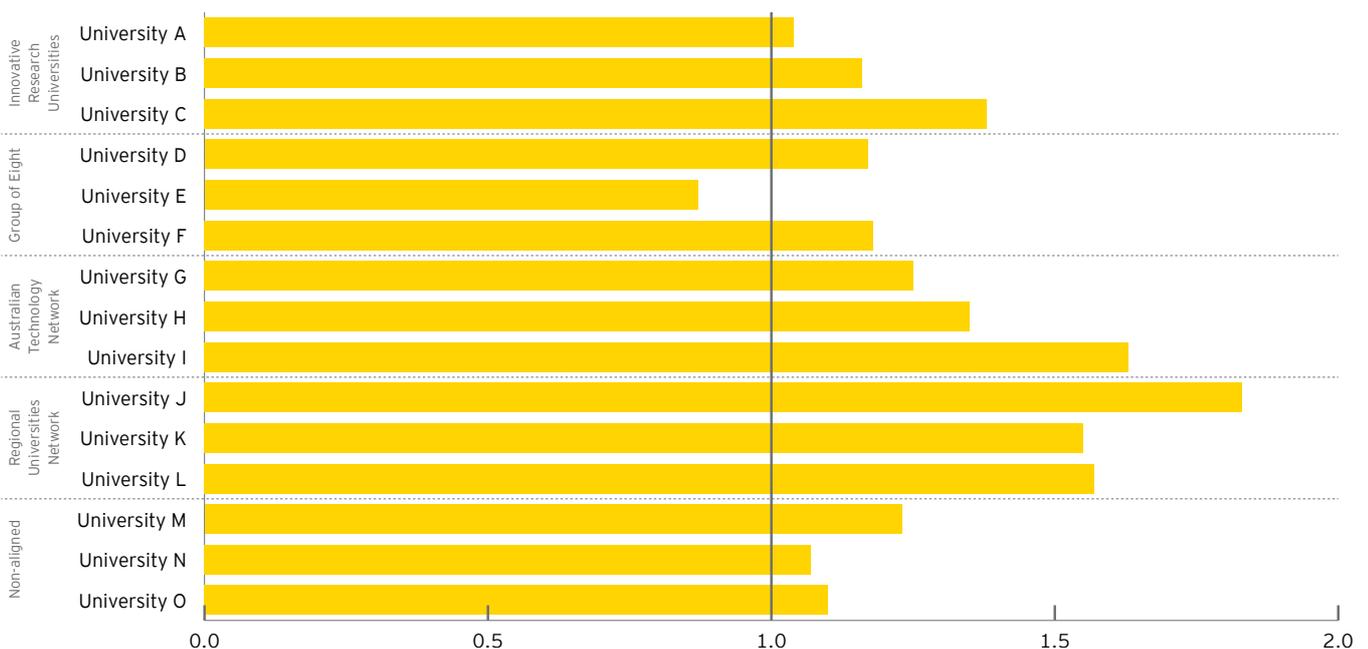
Most universities have ample scope to streamline their business and operations. Figure 9 charts the ratio of support staff to academic staff across a sample of 15 Australian universities – three from each of the four representative groups, and three non-aligned universities.

Only one of the universities – a Group of Eight university – has a ratio less than one. All the rest have more support staff than academic staff. Four of the universities have 50% or more support staff than academic staff, and more than half (8 of the sample of 15) have at least 20% more support staff.

Organisations in other knowledge-based industries, such as professional services firms, typically operate with ratios of support staff to front-line staff of 0.3 to 0.5. That is, 2-3 times as many front-line staff as support staff. Universities may not reach these ratios in 10-15 years, but given the ‘hot breath’ of market forces and declining government funding, education institutions are unlikely to survive with ratios of 1.3, 1.4, 1.5 and beyond.

Use of assets is also an area with scope for much greater efficiency. Most universities own and maintain a sizeable asset base, much of which is used only for four days per week over two 13-week semesters – not much more than 100 days per year.

Figure 9: Ratio of support staff to academic staff, sample of 15 Australian universities
All ratios based on Full Time Equivalent (FTE) staff data, reported as of September 2012

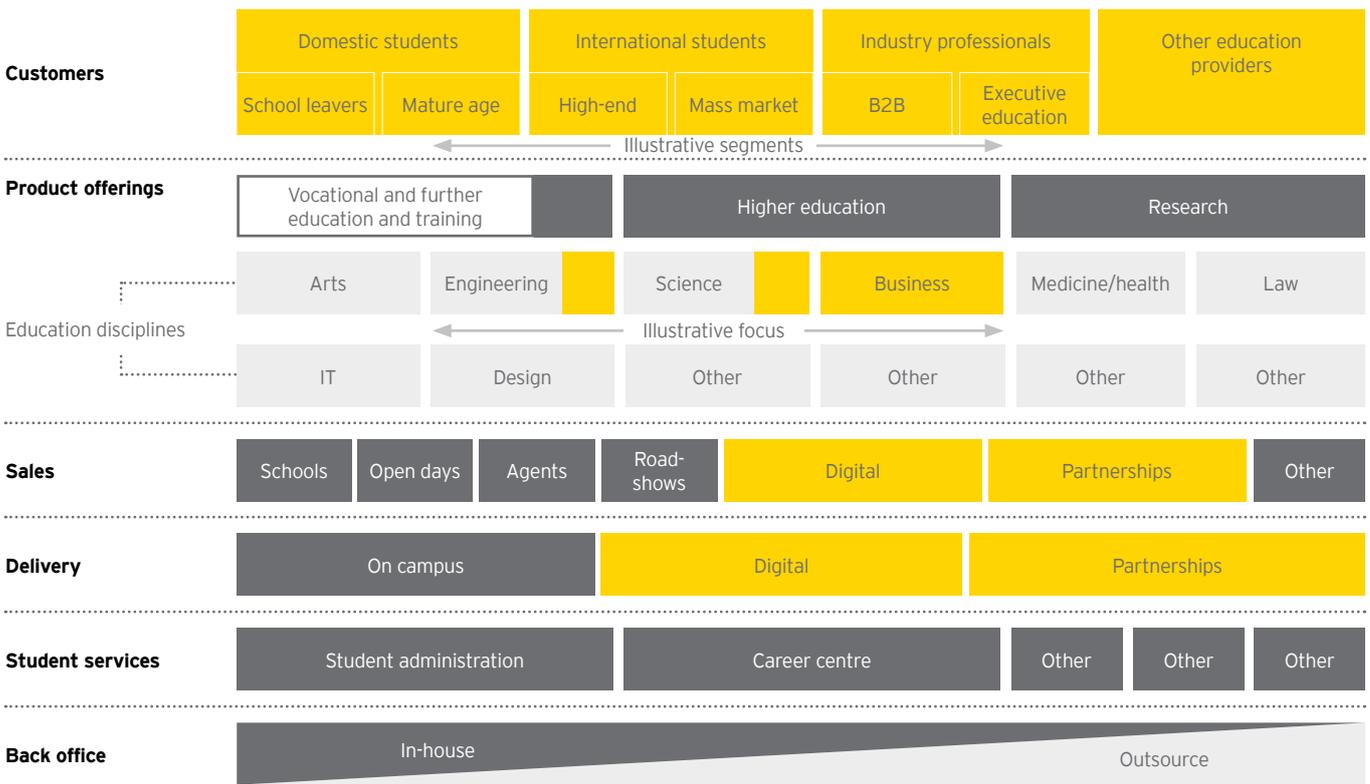


Sources: University statistical reports; Ernst & Young analysis

Evolution of the university model – ‘Niche Dominators’

Some universities will fundamentally reshape and refine the services and ‘markets’ they operate in, with a concurrent shift in their business model, organisation and operations.

Figure 10: Potential future model – ‘Niche Dominators’



Source: Ernst & Young

In this model, the university:

- ▶ Chooses particular customer segments to focus on – for example, mature age distance learning students, international mass market or industry professionals – enabling the targeted development of course offerings, sales channels, delivery, and related services, such as industry based learning, career placement and outreach, and embedded research programs.
- ▶ Significantly reduces its range of education disciplines, creating a focused set of areas of genuine domestic and global strength and credibility.
- ▶ Builds deep alliances with industry in its chosen fields, including partnerships to support R&D, commercialisation of research and innovation, professional skill development, and lifelong learning.
- ▶ Like Streamlined Status Quo, streamlines its back office, including using outsourcing and/or shared services models to drive efficiency and economies of scale.

The drive towards this model will come from the challenge of staying competitive – in domestic and international markets – across a broad range of disciplines and segments.

“The big change will be partnerships with industry around niches...”

University Vice-Chancellor

The drive towards this model will come from the challenge of maintaining a competitive position – in domestic and international markets – across a broad range of disciplines and segments. Jack Welch’s ‘rule of two’ will increasingly come to bear: you’re either number one or number two in your chosen field, or you exit – either by choice or driven by market forces⁸.

Some leaders we spoke to raised the need for scale as an inhibitor of the growth of the Niche Dominator model, citing 20-25,000 students as a base number to maintain an economically viable Australian university.

However, this constraint assumes the current asset base and operating model of the typical Australian university. Universities that move to a significantly streamlined asset base and operating model – for example, utilising physical assets across the year rather than two 13-week semesters – will make the Niche Dominator model increasingly feasible.

Private providers and new entrants will also carve out market positions using Niche Dominator models, building fit for purpose, segment-focused businesses without the constraints of legacy assets and workforce structures; for example, BPP University College in the UK.

.....
Can your institution maintain a strong competitive position across a broad range of disciplines?
.....

Aalto and BPP University College – a focused set of disciplines

Officially launched in September 2010, Aalto University was formed by merging three Helsinki-based universities in technology, art and design, and economics⁹. Aalto’s mission is to contribute to solving global issues through a multi-disciplinary approach to research and teaching and to support the internationalisation and competitiveness of the Finnish economy.

Even after merging three separate institutions, Aalto has a focused range of programs. Aalto seeks to strengthen and differentiate these programs through its multi-disciplinary approach, partnerships with industry, design hubs and programs that promote innovation and entrepreneurship. Aalto aims to use strengths in its chosen fields to achieve a place among the world’s top universities by 2020 and seed a new generation of innovators.

In the UK, BPP University College¹⁰, a for-profit provider of higher education degrees owned by Apollo Global, focuses on providing profession-focused higher education programs in accounting, banking and finance, law, marketing, and human resources. BPP focuses on students seeking professional qualifications and therefore builds teaching programs and industry partnerships linked to the professions.

8 See “The Competitor: Jack Welch’s Burning Platform” by Amir Hartman, ftpress.com, 2003

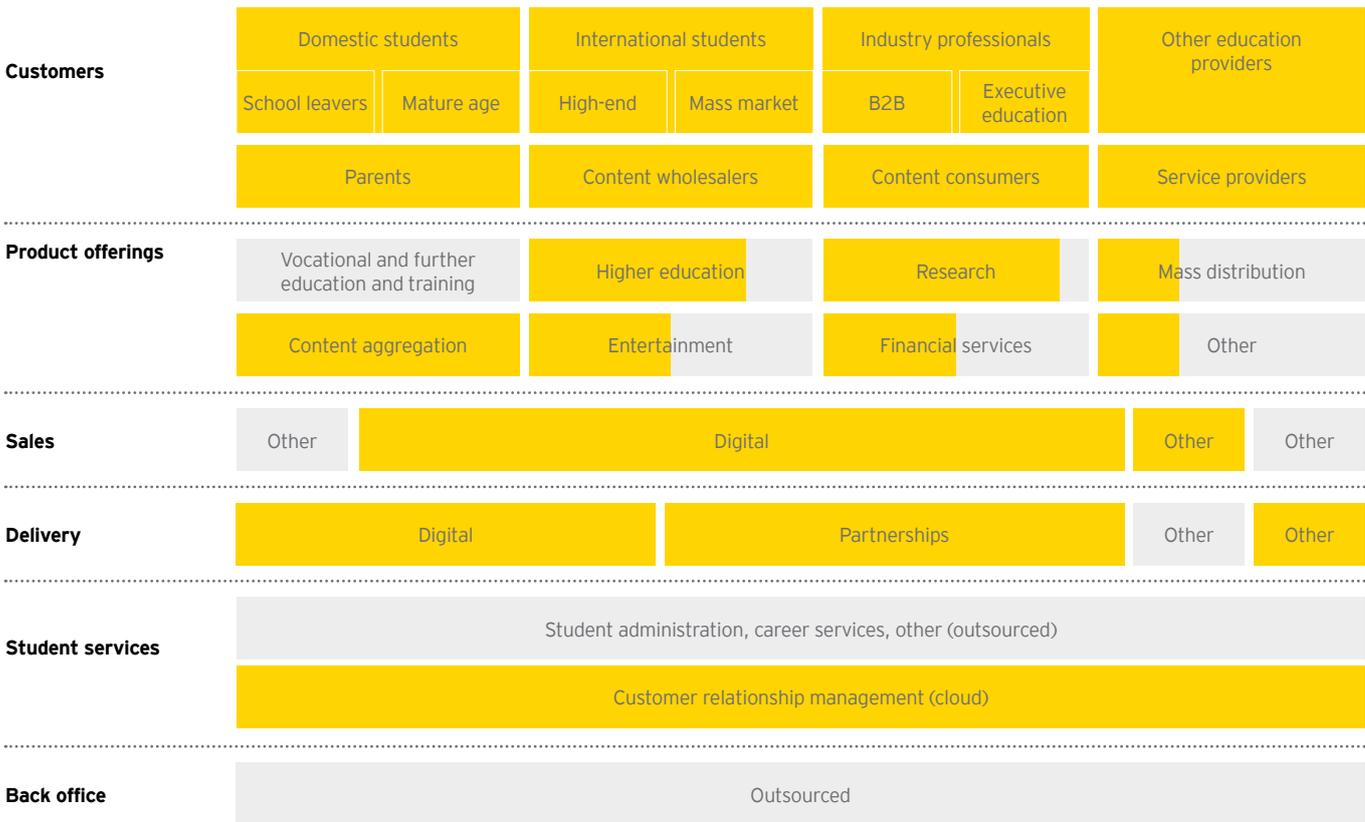
9 Aalto University (aalto.fi/en)

10 BPP University College (bpp.com)

Evolution of the university model – ‘Transformers’

Private providers and new entrants will carve out new positions in the traditional sector, creating new markets that merge parts of the higher education sector with other sectors.

Figure 11: Potential future model – ‘Transformers’



Source: Ernst & Young

Legend Potential areas of focus for new models

The model in Figure 11 represents a range of possible market positions to be pursued by innovators, rather than representing a ‘model’ of a single institution. In this world, the innovators:

- ▶ Extend the definition of a higher education ‘customer’ to include content wholesalers, content consumers, financiers, employers and parents.
- ▶ Disaggregate the value chain to create new areas of specialisation, such as content aggregation, mass distribution, assessment and certification.
- ▶ Combine traditional education services with services in related industries, such as media and entertainment, financial services and venture capital.
- ▶ Build a sales model that is predominantly digital and build delivery models that combine digital services and specialist ‘face to face’ services sourced from partners.
- ▶ Outsource student services, while retaining ownership of their customer relationships, using cloud-based customer relationship management tools and techniques.
- ▶ Outsource their full suite of back-office functions.

The key for public universities in this world is to cut the right deal – a deal that builds in brand protection and a reasonable share of the value created.

“We’re all looking for additional sources of income.”

University Vice-Chancellor

In our view, the evolution of the Transformer model will be led by private providers and new entrants, not incumbent public universities. This level of ‘disruption’ is hard to lead from the inside. However, savvy public universities will seek opportunities to create value in this space in partnership with private providers and new entrants.

Incumbent public universities bring two critical assets to this model: credibility and academic capability. In an age of ubiquitous content, ‘content is king’ no longer applies. Credibility is king – and increasingly ‘curation is king’. Universities are uniquely positioned to bring credibility and to act as curators of content.

The challenge for public universities in this world is to cut the right deal – a deal that builds in brand protection and a reasonable share of the value created. The answer might lie in a consortium approach, especially if the prospective partner has the market weight of a global technology or media company.

For public universities that get this right, the rewards will be high: increased global reach of the core mission and brand, not to mention much needed incremental revenue to support internationally competitive education and research programs.

What impact will innovation and new models in higher education have on your institution? What opportunities will they open up?

Venture Garage

In 2009, a group of students convinced Aalto University in Finland to grant €500,000 to establish Venture Garage, a hub for entrepreneurs and start-ups based on one of Aalto’s main university campuses¹¹.

Venture Garage combines physical space and virtual communities to promote entrepreneurship in Aalto University and to promote venture capital and innovation in Finland. Venture Garage provides links to venture capitalists in Europe and the US, links to academics and research within the university, and a space for young entrepreneurs to develop and launch companies.

Venture Garage runs entrepreneurship programs and competitions to encourage and find the most-promising start-ups, rewarding them with access to facilities, investors, and coaching from experienced entrepreneurs.

Coursera

Coursera is an online university enterprise created by two computer science academics from Stanford University¹². In April 2012, Coursera secured \$16 million in venture capital funding, seeking to make “the best education in the world freely available to any person who seeks it”¹³. More than 30 international universities offer online courses on the Coursera platform, with the University of Melbourne the first Australian university to sign up. As of September 2012, Coursera claimed to have 1.4 million students and is growing rapidly. The long-term outcome of ventures like Coursera, edX and Udacity remains unclear, but the impact on the sector will be profound.

11 aaltovg.com

12 coursera.org

13 coursera.org/about

Evolution of the university model – conclusions

Hybrid models and other models are also possible; regardless of the model and direction they choose, universities face the most interesting of times.

“It’s going to be a tough decade.”

University Vice-Chancellor

Conclusions

The models described above present three lines of evolution of university business models. There are, of course, other potential models, including: life-long learning models, global alliance models, multi-disciplinary models and hybrid models. A number of the leaders we interviewed spoke of a ‘model 1-model 3’ hybrid. That is, continue with a leaner version of their current model, while looking with interest at the possibilities presented by selectively playing in a ‘Transformer’ world.

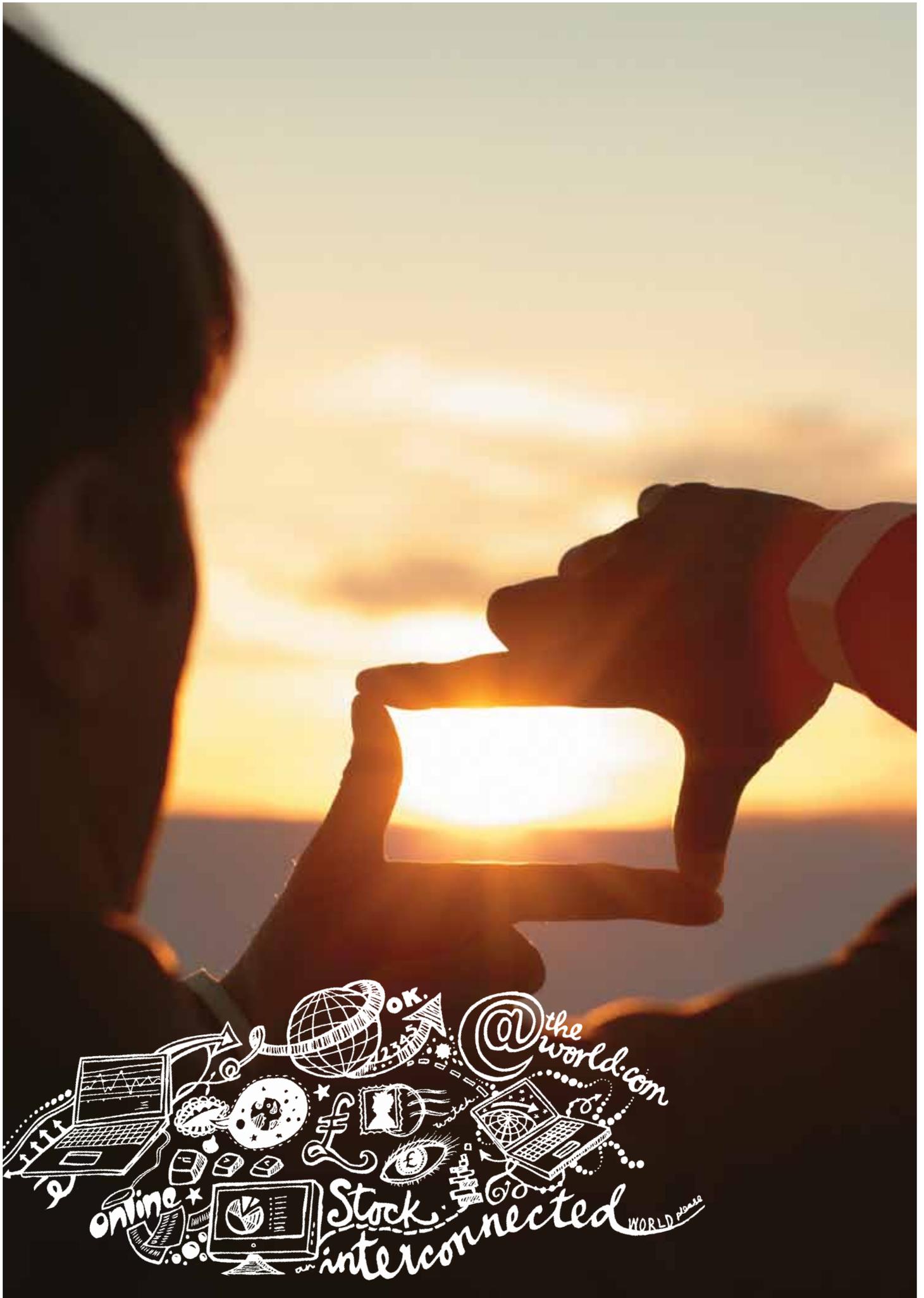
Many of the leaders we spoke to saw teaching-only institutions as inevitable. Interestingly, not one of them – and we spoke to leaders of more than 20 universities in Australia – saw their own university becoming a teaching-only institution. The policy makers we spoke to were also sceptical of this model.

We share this scepticism. It would be a brave step for a university in Australia to completely relinquish research as a stated aim or part of its business. Nevertheless, research will become increasingly concentrated in universities that can demonstrate excellence and impact.

Smaller universities will become increasingly focused on a narrow range of research programs. To make this work, they will need to explicitly tie education programs and industry partnerships to these focused programs – as per the ‘Niche Dominator’ model – or invest in a distinct student experience for teaching and learning programs not tied to research.

It may be that in 10-15 years time a small number of Australian universities have evolved to become specialised tertiary education teaching institutions, with no research programs at all. However, at this stage, we see it more likely that even the smaller universities will find ways to maintain at least 2-3 targeted research programs, potentially in partnership with other institutions.

Regardless of the model and direction chosen, universities in Australia face the most interesting of times. The following section explores the above implications further, covering the challenges that universities will need to overcome to enable them to implement new models, key considerations for policy makers, and opportunities for the private sector.



Implications for universities

To build a successful model into the future, public universities will need to address a number of challenges, regardless of their chosen model.

Future challenges

- ▶ **Quality and academic excellence**
- ▶ **Academic talent and workforce structure**
- ▶ **Commercial skills**
- ▶ **Change management and speed to market**
- ▶ **Relationship with government**

a) Quality and academic excellence

Regardless of the target segment – metropolitan students, regional students or international students – and the pressure on institutional finances, universities will need to find ways to maintain academic excellence and deliver quality teaching and research. Some in Australia worry that quality will suffer in a competitive market. This may happen at the margins, but over time those that cannot maintain quality will lose market share and relevance.

b) Academic talent and workforce structure

The academic workforce in Australia is aging, significantly more so than the rest of the workforce. A quarter of Australia's academic workforce is aged 55 and over, compared to 15% for the rest of the workforce in Australia¹⁴. For the 45 and over age group, the percentage is 54% for the academic workforce compared to 38% for the rest of population. Significant proportions of this workforce will retire in the coming decade.

Universities will need to attract new talent to replace this workforce, and at the same time build a new workforce structure that can support new business models, deliver increased productivity, and accommodate non-traditional operating models – for example, tri-semesters and northern hemisphere timetabling.

c) Commercial skills

As higher education markets become increasingly competitive and consumer-driven, public universities will need to deepen their commercial skills and capability – both in the administrative and academic workforce. This will be needed, not just to secure market share in undergraduate and postgraduate student markets, but also to enable universities to cut the right deals with private providers and new entrants.

d) Change management and speed to market

The new models that universities develop and implement over the coming decade and beyond will require significant change. Universities have traditionally been resistant to change, typically citing the need for academic independence and the purity of the mission. University leaders will need to find ways to stay true to the mission, maintain academic integrity and independence, and at the same time change their business and operating models.

A critical component of this change will be the need for speed to market. As the market becomes increasingly competitive domestically and internationally, universities will need to be first to market with new teaching and research programs and innovative student experiences.

¹⁴ Hugo, G., "The demographic outlook for Australian universities' academic staff, CHASS Occasional Papers, 2008.

Challenges include the relationship with government, which will need to evolve from 'fight for funds' to partner for the nation's future.

"Universities should be embedded in Australia's economic growth... but we're not!"

Head of university representative group

e) Relationship with government

Australian governments, regardless of political persuasion, will be increasingly fiscally constrained, at least in the next 3-5 years, and probably beyond.

Government funding as a share of university revenue will likely decline. Universities will need to search for ways to move beyond the 'fight for funds' relationship with government. Ideally universities will be seen as key partners for government in stimulating innovation and economic growth. For example, universities might participate in joint initiatives with industry and government that promote the development and commercialisation of new technologies, and create opportunities and skills for a new generation of entrepreneurs.

Universities will also need to find ways to become increasingly influential from an electoral point of view. "There are no votes in higher education," was a common lament in our discussions with university leaders. A number of leaders in the sector are endeavouring to shift community and government mindsets on this point; this needs to continue apace.



Implications for policy makers

Policy makers have limited influence over the decisions of individual institutions, but must find ways to set a framework that maximises the sector's contribution to Australia's future.

Key policy issues for consideration

- ▶ Role of higher education
- ▶ Scenario modelling
- ▶ Regulation
- ▶ Role of the private sector and new entrants
- ▶ Price flexibility

Policy makers find themselves in a difficult situation. Universities in Australia are increasingly operating in contestable markets and relying on non-government funding sources; yet they deliver many services that are, at least in part, a public good.

The sector is also one of the main drivers of Australia's economic future as a key source of the talent, insight, new ideas and intellectual property required to build a high-performing knowledge economy. The sector also provides life-shaping opportunities for thousands of students from economically disadvantaged communities. Thus, the shape and performance of the sector matters critically to the future of the nation, yet policy makers are increasingly limited in their ability to influence the decisions of individual institutions that will drive their future shape and performance.

It is beyond the scope of this paper to cover the full range of issues that policy makers must grapple with. Rather, we have highlighted a subset of key issues that need to be addressed to prepare for a changed higher education landscape:

a) Role of higher education in the nation's future

Politicians and policy makers should present a clear policy and public case for the critical role of higher education in the nation's future, to build public support for the university sector and set the foundations for higher education public policy.

b) Scenario modelling

Policy makers should model different scenarios for the sector over the next 10-15 years; for example, to consider how the models described in this paper might evolve, what it might mean for the 'public good' role of universities, and what role policy might have to optimise the outcome for the public good and the nation.

c) Regulation

TEQSA is still new and evolving the way it implements its oversight of the sector. In the longer-term, governments and regulators need to consider how new university models might fit into their regulatory frameworks, and what forms of regulation might be appropriate to maintain standards of quality, at the same time as enabling innovation and new models to develop.

d) Role of the private sector and new entrants

Policy makers will need to have a view on the desirability or otherwise of the private sector and new entrants – domestic or international – creating new models or carving out market share using existing models.

e) Price flexibility

Price flexibility is no panacea, but under the right conditions might enable universities to secure much needed funds for the future. Those conditions must balance price flexibility with equity and the economically and socially critical participation agenda.

Implications for the private sector

We foresee very large opportunities for the private sector – ambitious players will need to move fast to establish new models and secure partnerships with leading incumbents.

“We bring university education to those who haven’t had it before and help them to get a great job.”

**Managing Director,
Private-sector
university operator**

The implications for the private sector should at face value be more straightforward: find opportunities to create value and craft the business models required to bring them to life. We contend that opportunities exist for more than just traditional private providers of higher education.

We see a role for media companies, technology providers, financiers, and a range of industry groups to create value providing services within the higher education value chain, such as content distribution, commercialisation, industry placements and certification. Some of these services might be provided on a stand-alone basis. More likely, however, are joint-ventures or partnerships with incumbent institutions that bring market credibility and academic capability.

Higher education markets have superb fundamentals for long-term growth – for example, annual spend on higher education in Asia will grow by a trillion dollars or more over the next fifteen years¹⁵ – and provide links to burgeoning middle classes in emerging markets. Given the scale of this growth, we encourage potential private sector players to put serious resources into establishing new models and to start securing partnerships with leading incumbents.



¹⁵ Based on Ernst & Young analysis of participation growth rates, populations and annual spend per student, we are forecasting annual spend on higher education in the Asian region to increase by more than a trillion USD by the year 2030.

Ernst & Young's framework for assessing and designing a model for the future

Universities should critically examine their current model, develop a vision of what a future model might look like, and develop a broad transition plan.

Universities should assess if their current model is future proof, and, if not, determine where and how to play in the future. Ernst & Young is uniquely placed to assist in these deliberations.

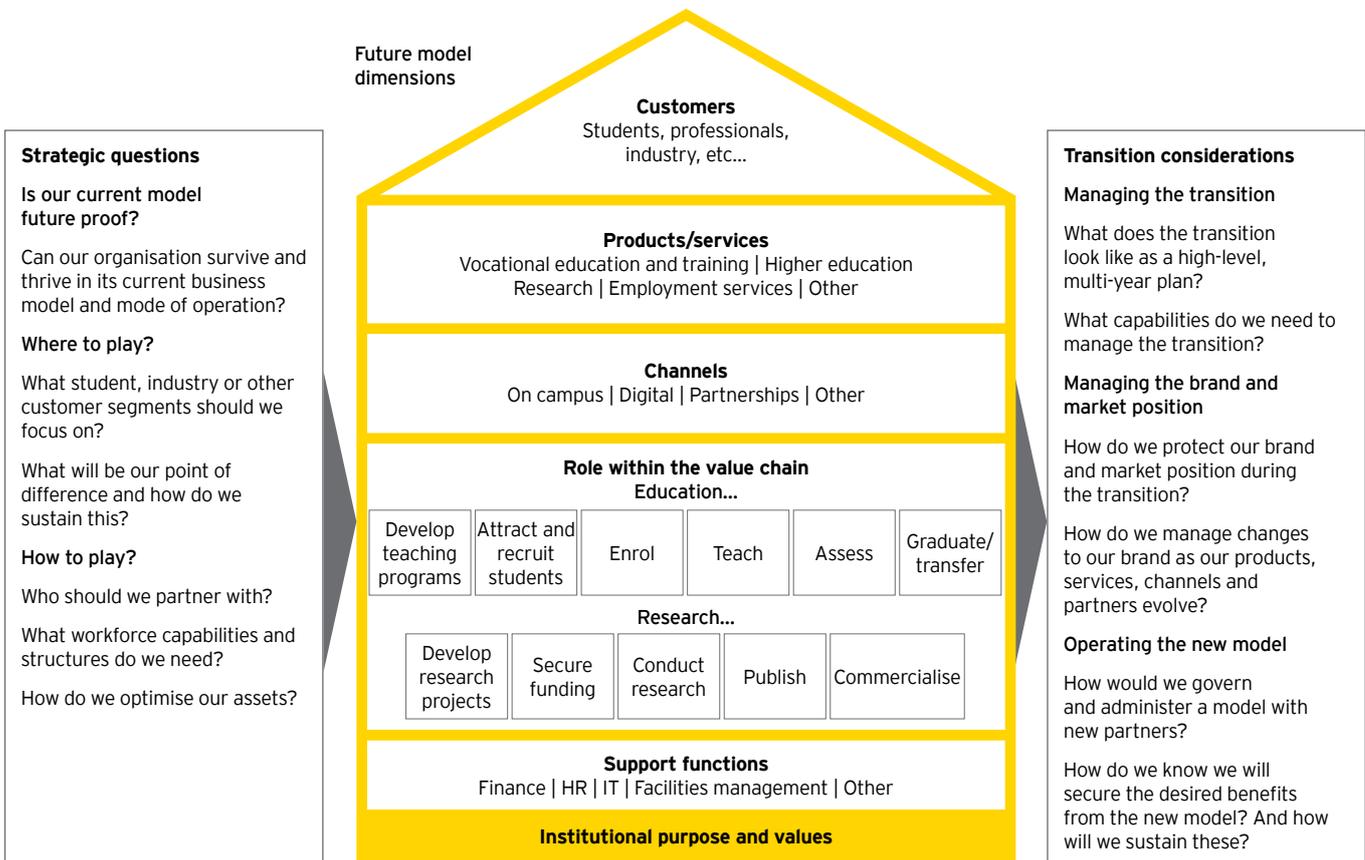
We believe the drivers of change described above will fundamentally transform the higher education sector. Our hypothesis is that these drivers, over the next 10-15 years, will render the dominant Australian university model of today unviable in all but a few cases.

To address the implications specific to their institution, public universities need to consider a series of strategic questions related to the viability of their institution's current model, and where and how to play in future.

Deliberations on future models need to include which customer segments to focus on and what services they need, and the universities' channels to market and role within the value chain. Support functions will also need to be streamlined. Regardless of the path chosen, reform will need to align to the institution's purpose and values.

Is your institution's business model ready for the future?

Figure 12: Ernst & Young's framework for assessing and designing a university model for the future



Source: Ernst & Young

Ernst & Young Higher Education contacts

Our higher education team – with deep strategic and operational experience in the sector – is ideally placed to advise university leaders on the transition to new models for the future.



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Methodology

Ernst & Young undertook an industry wide study of the forces impacting the higher education industry globally and locally, and the opportunities, challenges and implications for Australian universities.

Primary Research – Senior Executive Interviews

We interviewed more than 40 senior executives from public universities, private universities, policy makers and sector representative groups across Australia, to understand their views on:

- ▶ Drivers of change in the higher education sector
- ▶ The long-term future of universities
- ▶ Potential evolutions of the university model
- ▶ Implications for their institution

Our interviewees included leaders of more than 20 universities, including 15 Vice-Chancellors.

Ernst & Young would like to thank each of the interviewees for their time and thoughtful contributions to the research and points of view discussed in this paper. The views expressed in this paper, though informed by this research, are those of Ernst & Young alone.

Market Analysis

Market analysis included assessment of the:

- ▶ Drivers of growth in higher education internationally
- ▶ Levels of competition pre and post the introduction of a demand-driven funding model in Australia
- ▶ Drivers of student choice
- ▶ Current university operating models

Secondary research of overseas markets

We conducted secondary research into international developments in higher education, including reviewing higher education markets and developments in: North America, Asia, Latin America, Europe, the Middle East, Africa and Oceania. The research identified changes impacting the higher education industry and new and emerging models in higher education in these markets.

Leveraging our network of industry leaders

Ernst & Young insights from international locations were used to complement the views of the Australian higher education team, as well as insights from our team's extensive work in other industries undergoing major transformations; for example, media, retail, utilities, telecommunications, banking and insurance.

Ernst & Young research team



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