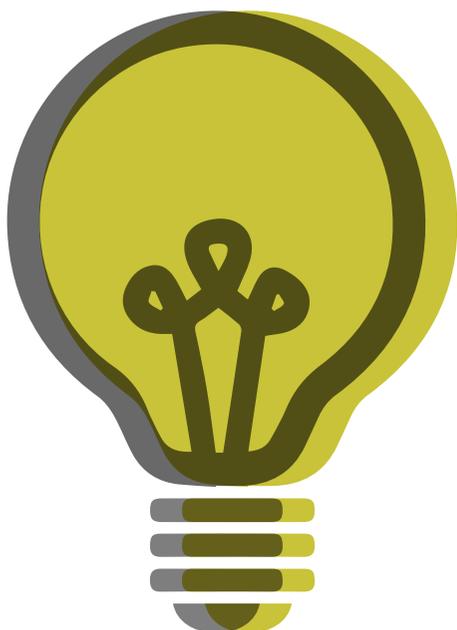


HOW UNIVERSITIES & ACADEMICS CAN BEGIN TO INNOVATE RIGHT NOW



BY SHIFTING THEIR FOCUS & THEIR THINKING

Today **innovation** is banded around so much and in a variety of conflicting contexts that the word – and subsequently the action promoted – is fast becoming meaningless. So up front let's be clear by what we mean. Our preferred definition comes from the Haas School of Business at The University of California, Berkeley: “capturing and capitalizing on the opportunities created by new technologies, new markets and new ways of doing business.”

As we will show, when it comes to higher education this definition can be applied not just to the obvious focus of translating science and technology into marketable products, but also to the core business of universities – educating their students to navigate the challenges of the future.



The Federal Government, with the release late last year of its science and innovation package, has done a great job of encouraging a mission and being direct and honest about how poorly Australia performs in one area of innovation – transforming research outcomes into social and economic benefit, with translation at the bottom of the OECD, 72nd in terms of innovation efficiency.

The call for a “high performing innovation economy” is echoed by CSIRO chief executive Larry Marshall, who says that in an interconnected world of accelerating, technology-driven change, our future prosperity, health and sustainability is closely bound to our capacity for innovation.

It’s not that the higher education sector is blind to innovation – indeed, there are many examples of innovation within universities – however, according to a recent report by the Australian Council of Learned Academies

(ACOLA), Translating Research for economic and social benefit, no Australian university is ranked in the top 100 innovative universities worldwide.

Reasons identified for this state of affairs include “the absence of effective institutions, relationships and incentives” while overarching policies and programs

are “fragmented, uncoordinated and under-resourced”. To be fully effective “policies and programs to encourage increased research translation need to be part of a stable national innovation strategy and administered by an independent agency”.

HECG is a passionate supporter of these recent Federal Government initiatives but perhaps the weakest part of the innovation discussion to date is that it mostly focuses on a small part of what the sector (other than institutions such as our clients [CSIRO](#) and a few others) – actually does: translating research into industry.

This type of activity is important and can certainly be improved but is not central to the business of universities, and so the significant changes desperately needed in core areas – teaching and academic research – are not directly addressed. But it is in precisely these areas that innovation can have the most material impact, and in the shortest time.

Universities are now under pressure to surf the Innovation Wave, but in fact there is an “Innovation Rip” right under the sector’s nose that many are in danger of missing. This “rip” is the core business of universities – teaching and research. It is puzzling that so much effort on innovation is focused away from this core.

The average university generates in excess of half a billion dollars a year in education revenues and a similar amount in research revenue. Surely this is where universities should direct their innovation focus? The activity surrounding translational research and commercialisation is significantly smaller than that.

Some people may argue that there is little additional money to be made in these core areas and that many new opportunities in innovation will be in research outcomes. But while new money is always attractive it is of much smaller scale than in existing, traditional revenue sources. We have seen many incredible innovation opportunities and in our experience every university has them – a new program attracting 1,000 students can generate over \$25,000,000 per year and if it were a company a lifetime value well in excess of \$100,000,000. How many spin-out companies achieve this scale? This is innovation of incredible direct value to the university and each university has these opportunities if it is prepared to seize them.

SO WHAT ACTIONS CAN UNIVERSITIES TAKE TO SEIZE THEM?

Higher education institutions could begin with an examination of their current activities, asking themselves questions such as:

What is our current practice for:

- capturing potential opportunities?
- capitalising on identified opportunities?
- creating opportunities from new technologies; new markets; and new ways of doing business?

Searching for answers to these questions will help universities to analyse their current practice, identify its incentives and drawbacks, and to navigate a way forward.

This sounds simple, but of course it isn't. Universities are not homogenous institutions with one single purpose or goal. They are multi-layered, multi-faceted, influenced to a large extent by their history and location, and have missions such as pure research and community engagement not governed by profit motive.

Within this system, however, it is possible to create what we call "Innovation by Design" and "Innovation by Culture". The former involves establishing processes for innovation while the latter involves growing an environment where innovation can occur through problem solving and the creation of new opportunities across a range of fields.

Universities are by their nature filled with brilliant minds but, because "Innovation by Design" and "Innovation by Culture" generally are not in place, they are not great innovators. To a large degree, we argue, this is because they are focusing their incredible human capital on navigating limited change rather than facing challenges such as:



what are new ways we can achieve real innovation by identifying and capturing new opportunities, exploiting those opportunities, and finding new ways of doing business in new and existing markets?"

The power to innovate within universities is not simply about creating successful commercial ventures. In a very real sense it is about educating future generations for the complex world in which they must live and compete (and cooperate).

Courses that teach or inspire innovative mindsets will work best if they are based on real innovation, which implies the ability to deal with complexity and constant change. The days of one or two jobs in a lifetime are long gone. For example, as reported by The Sydney Morning Herald, the Foundation for Young Australians 2015 found that “young Australians are likely to have up to 17 jobs and five career changes in their lifetime, and that up to 60 per cent of the jobs students are currently studying for are likely to be automated in the near future”.

All of which means that numerous degrees and programs will have to be restructured in an innovative way, not only in terms of content, but also in delivery. Many universities are already doing this.

As one example we highlight Charles Sturt University’s [excellent new Bachelor of Technology](#)/Master of Engineering, which has been designed to “meet industry’s demand for entrepreneurial engineers who can make a difference in their communities”.

For starters, the Engineering School is hosted within the Business Faculty so that as well as learning how to be excellent engineers students are also taught



communications, financial and management skills – an obvious practical advantage in a competitive work space.

And a major **innovative** standout is that while student engineers begin by studying at the Bathurst Campus for 1.5 years, after that their education continues as paid employees in industry, studying the theoretical curriculum online. As the university says: “Our student engineers won’t just learn engineering as they study, they will live it.”

Executive MBAs, such as those taught for example at University of Technology Sydney and the Melbourne Business School, have created student-centred collaboration models which have increased demand and appeal. Other universities are supercharging new models of education – eg, Harvard University’s Global Institute looks to encourage research across international boundaries while MIT through MITx is pushing the limits of online learning.

Meanwhile relatively new players such as Coursera, Udacity and Minerva are disrupting traditional higher education models through new delivery mechanisms, while organisations such as Google, Apple, Busuu, Canvas and many others are leading the way in student-led technology applications.

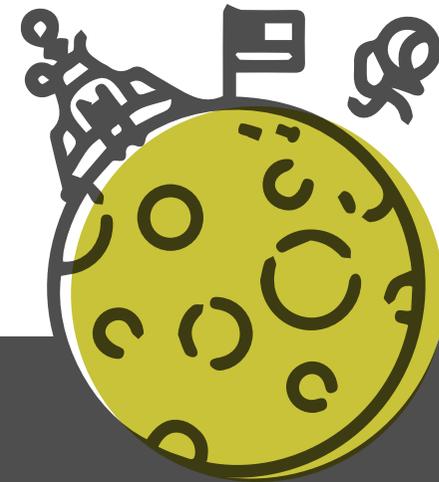
To some extent, though, the above initiatives are about doing the same thing in different ways, presuming an understanding of what students and employers want. A completely new model could begin by taking the [Simon Sinek approach](#) – that is, questioning the “why” of what you are doing and examining your core “purpose, cause and beliefs”. Such reflection would entail a thorough examination of student and employer needs, and then looking at new ways of meeting those needs.

In Australia [Deakin University is a leader in Work Integrated Learning](#) in large part because it has asked this crucial “why” question. Deakin has also released a set of strategies aimed at increasing connection and flexibility for students including its new web site [this](#). | [Powered by Deakin](#), a new accreditation model, lifetime of learning offerings, and the use of business intelligence platform – [IBM Watson](#) – to understand and connect with student needs. It is a rhetorical to ask whether these actions or the innovation in translating research will have a greater impact on Deakin, but they do show that innovation in multiple areas can boost a university’s profile while at the same time contributing to the cause of education.

To enable the identification of opportunities universities must know both what they are looking for and how to create what they can’t find. In its simplest form this process starts with looking through the lens of a target stakeholder – trying to see what they need and want now, and what their future needs may be. As discussed in more detail below, more complicated but achievable are acquiring the skills needed to design future offerings. To achieve this some universities have or are in the process of creating innovation or design hubs such that developed by Australia’s RMIT University. This follows a trend in large consulting firms that see this as a tremendous new revenue source, but which also demonstrates recognition by those universities that this is a capability they can and should own.



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“What if we could” scenarios...
 ...rather than the traditional
“What could we do with our current limitations”.



Outside of higher education, but closely related, Australia’s CSIRO is an exemplar of cutting-edge thinking with its [Innovation and Entrepreneurship initiative](#) designed to “reinvent existing industries and create new industries”. Institutions looking to drive innovative practices can learn from such models by examining the critical success factors to ensure their efforts do not become meaningless.

To succeed in the new environment we suggest universities need to develop “innovation missions” that focus on their current and potential strengths. This requires a leadership prepared to make bold and actionable statements, clarity about what they want to achieve, with a specific timeframe and conditions. An extraordinary example of

this can be found in the July 16 1969 Apollo 11 Moon landing, the “giant leap for mankind” beginning with President Kennedy’s challenge eight years earlier to put a man on the Moon by the end of the decade. NASA responded by looking at “what if we could scenarios” and then challenging themselves to find a way – overcoming limitations – rather than the traditional “what could we do with our current limitations”.

At Macquarie University when launching the very successful Bologna Model HDR Program we were faced with the response that it was “impossible” and would not have succeeded without our relentless DVC-R Jim Piper driving a “what if we could” mentality and finding way to overcome the barriers.

HOW CAN UNIVERSITIES MOVE FORWARD AS INNOVATORS?

We suggest the following practices:

1

CREATE INNOVATORS FIRST

- This should be a core capability supported by internal learning and development not a hired-when-needed luxury
- The best ideas will come from your brilliant minds empowered with innovation techniques and the freedom to execute them
- Understand that great ideas often come from seeing something wrong and wanting something better – create an secure environment to challenge the status quo
- Good ideas mean nothing if they can't be executed. In the words of John Dyson, there needs to be a "strong commercial ecosystem" to make great ideas a reality.

2

EXAMINE THE DRIVERS FOR INNOVATION WITHIN YOUR ORGANISATION

- Do you need new programs?
- What opportunities can be created by leveraging your strengths?
- What can you learn from competitors?

3

CREATE AN INNOVATION PROJECT WITH DEFINED MEASURABLE OUTCOMES, BUDGET AND TIMEFRAME

- All innovation comes from action but most innovation comes from iterations not single events – get the process started and iterate quickly
- Understand that innovation is a funnel – a lot goes in but only the best should come out
- Create interim success goals – momentum matters – it is very easy to lose in an innovation program as the "winner" may take time to emerge or the barriers grow.

4

HAVE THE COURAGE TO TAKE RISKS

- Personal drivers of innovation are often in the positive sense achievement of a mission – to be a great achievement the solution can't be known at the start and as such people have to have the courage to go for a result when they don't know they will succeed – this is a necessary and inevitable risk. Large organizations like Universities struggle to take these risks. The mission statement is often a major risk for the leader: if properly framed with a clear goal, timeframe and conditions it opens up the risk of failure on many levels. But without it little change in behavior is likely nor is the achievement of the mission. How many leaders in education make statements such as: "We aim to be in the top X" without any timeframe or conditions – insulating them against risk of failure? When leaders take risk they send a message to their wider team to take risks. They should also create a recognition that the taking of risks to achieve the mission is essential and as such will be rewarded, not penalized.
- Finding out why something won't work is so much easier and requires much less courage and intelligence than creating a way it will work. Challenging should be encouraged but this should drive finding better solutions rather than creating barriers or dismissive responses.
- Identify what other barriers are stopping you from innovating. Are the barriers actual or self created? How many times do we hear "can't be done" to find out that these limits are self-imposed?

INNOVATION IS ABOUT CHANGE

- While having to accept change forced upon it, the higher education sector is generally highly resistant to change
- Barriers to competition from private providers are being removed by government
- Providers are growing in areas with and without direct competition to traditional higher education
- International players are moving ferociously into both inbound markets and are coming to domestic markets
- Non-traditional values are gaining momentum – such as work-integrated-learning, where competitors, private and public, are finding ways to offset traditional prestige but subsidising other types of prestige, including people and brands.



While increased funding, tax breaks and reengineered structures and frameworks are obviously a great advantage, they do not in themselves guarantee success for universities desiring to innovate.

Change is on the way – indeed, it is already here. To thrive and prosper institutions must adapt to, rather than resist, the new.