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# The University in the Global Age:
## *Models of transformational change*

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# ABSTRACT

For some years now, through my academic career in both teaching and administration at the University of Canterbury and Massey University, I have had occasion to question the structure and role of tertiary education in the global age, which I note was declared to exist by the UN Secretary-General in the mid-1990s.

It is, however, one thing to entertain passing thoughts on this, and entirely another to dig deep into the subject. In 2019, I was fortunate to be granted an Eisenhower International Fellowship, to do effectively that. My visit around the United States in that year proved to be one of the most interesting professional experiences I have had. The discussions I was able to engage in accorded me new insight into the challenges facing the modern global university, the imperatives that face humanity, some of the options available for change within tertiary education, and the possible form of the 'new global university'.

My thoughts, based on the discussions I had, together with my own research, are set out below. I envision the concept of the 'Global University 2.0', and reflect on the extent of innovation that currently exists in the United States. I consider various models of transformational change to meet the challenges we now face, and offer some personal ideas of our future 'voyage'.

# Contents

1. **The Global University 2.0**

My project is an area that I have not only worked in, but which I regard as a life mission. It involves the exploration of implementation of a certain vision, namely:
- a vision of the university of the future;
- a vision tried in the fires of post-earthquake Christchurch;
- a vision that sees universities as community partners in addressing the imperatives of our time – sustainability, equality, equity, social enterprise, social justice, economic development and entrepreneurialism, to name a few.

It is my vision that qualifications come as a consequence of a university's pursuit of a meta-narrative mission.

We are not degree factories. I see universities as a community of scholars (academics, professional staff and students alike) working together and in collaboration with government, industry and society, to change the world by actualizing the society we individually and collective want to see.

The empowerment of individuals through attaining qualifications is a vital consequence of that mission, the importance of which must not be underestimated. But we are more than qualification-attribution centres.

Humanity is capable of working collectively to solve all of the most pressing issues of our time. But that will not happen by accident; it will happen by design.

Predictions over the future of work, globalization, the advancement of AI, and computerization, have all combined with falling budgetary support for universities and increasing industry dissatisfaction with the skill and ability level of graduates. They are creating a perfect storm in higher education.

The challenges facing the tertiary sector globally are thus multifaceted. They include the following nine.
- The changing nature of employment. Whilst the commodification of education over the past 60 years has seen universities move increasingly from providing education as a deontological good (as an end in and of itself) to a utilitarian product of importance to the advancement of national economies, universities nonetheless find themselves flat-footed in the modern world. In this regard, the basic model of a single degree for life predominates. In its present form there are two fundamental difficulties with the predominant tertiary model.
  - First is an over reliance on a degree structure that does not support life-long-learning and is, at best, merely a filter for industry in recruiting the people they need rather than providing genuine focused preparation.
  - Second, universities provide neither highly-trained specialists nor truly flexible generalists who fully understand multi-disciplinary collaboration or complexity theory based upon systems thinking.
- A multiplicity of competitors. Traditionally, universities have been based upon information discovery and dissemination. But in the modern world, such tasks have been democratized. Alternative providers – boot-camps, industry based training platforms, specialist third party institutions – are often better positioned to provide tailored employment focused training more cheaply and just-in-time, than traditional universities.
- A crisis of meta-narratives. More than ever, the world needs innovators whose thinking will act to change the normative foundation of our societies. These include citizens focused on sustainability, the development of alternative economic models, equity, equality, entrepreneurship, social enterprise and social justice. Therefore, citizens need to be prepared for the new century as well as employable on graduation.
- A broken funding model. Whether it be the system of student fees in the US or universal access to tertiary as in many Nordic countries and New Zealand, the funding mechanism supporting tertiary education is in need of re-evaluation.
- Over-reliance on a traditional credentialing model. Traditionally, universities have been secure under the predominant model of credentialing in which authority and legitimacy has originated from the State and centralized credentialing bodies. Innovations such as block-chain credentialing and industry training challenge such superiority.
- Student recruitment and retention challenges. Currently most universities operate poorly in the realm of engaging the non-traditional student market. Minorities, first generation students, and alienating class divides, have stretched universities in their capacity to engage all communities. In light of futurist predictions of mass extinction of whole classes of vocations, the future is not bright for universities which cannot engage all kinds of peoples.
- Inflexibility of curriculum. Universities are masters of Newtonian approaches to problems in which an ordered, rational approach is taken to problems by dividing them into logical units along traditional discipline lines. Rather than training people to deal with the organic and chaotic, universities are good at creating linear experts specializing in particular forms of thinking and problem-solving. It is not that the future has no need for such

skills, but that an over reliance on such an approach fails to adequately prepare citizens for tackling the 'Grand Challenges' of our times.

- <u>Digital delivery models</u>. Digital delivery deserves a category of its own albeit it is relevant to all other categories of modern challenge. Whilst representing a unique opportunity for brand development for some universities, for the majority it represents a significant challenge to the underlying financial model of their operation.
- <u>A silo over cooperative mentality of operation</u>. Universities have traditionally defined themselves as centre of knowledge and learning, rather than facilitators and partners in social development. The latter will help define the new university paradigm.

When I was in the US I witnessed the most incredible innovation in the US tertiary sector. In Section 3, I advance an outline of my *'Eisenhower Project'*, detailing the elements of my vision for tertiary education and the collaborative approach that I hope will typify the 21st c. university for the global community.


2. **US Innovation**

In the previous section, I identified what I see as the main challenges facing tertiary education, globally. These challenges, I suggest, have led many universities to an existential crisis as it dawns upon them that, for most, the traditional model of operation and financing has nearly run its course. So, what to do? I suggest that following:

*The challenge of reform*
The United States has perhaps the most diverse and innovative system of tertiary education in the world, due in large part to the fact that in the US, *niche* is massive. But many US community colleges and regional, four-year institutions will, nonetheless, face closure or amalgamation if they do not reform significantly.

Outside the US, I believe the same is true. Whilst *niche* in the US is often still the economic size of small countries, the changing nature of employment and new digital capabilities mean that alternative providers and industry training opportunities can operate with profit globally.

This does not mean the end of the degree, but for those institutions operating almost entirely on a student-fee and government-funding model, even small changes in their operating environment can mean the difference between mere downsizing and bankruptcy.

This is particularly true in New Zealand where, like individual US states, maintenance of more than one or two large globally-ranked universities is increasingly beyond our capacity. With eight large, globally-ranked, comprehensive universities in New Zealand and a near bankrupt polytechnic sector, the reality is that the system is ripe for disruption. However New Zealand is also well placed to be a global player in the provision of quality higher learning - not on a traditional 'internationalisation' platform, but as a distance provider of global significance.

*Confronting the challenge*
Let me convey my observations from my Fellowship travels around 14 US cities, visiting near 70 institutions and individuals. My travel took me across the US examining the most innovative university systems and alternative providers in the country. Primarily, I focused on three elements of university reform.

*1. Enfranchising people*
How to structure qualifications and work with public and private entitles to better engage those traditionally disenfranchised from college education due to race, class or minority status? Whilst universities are not the answer to all problems, our inability to effectively engage particular communities in terms of both student recruitment and retention will only increase as mechanization, globalization and AI makes extinct swathes of vocations in the near future. Our inability to engage will not only challenge the operation of our institutions, but will also undermine our ability to serve our societies in terms of economic prosperity and, even more importantly, to build safer, more secure, more trusting and sustainable communities.

*2. Managing info-tech*
How might universities can leverage digital and disruptive innovation to implement those engagement and retention strategies identified under 1 above? From fully online to public/private partnerships, through to block-chain credentialing – the future of life-long-learning is distributive, meaning that traditional providers are, and will be, only one of a number of options in higher education.

*3. Addressing the meta-narrative*

How to leverage the first two elements to more effectively address the meta-narratives of our time, and not merely provide disparate qualifications to a client based system of students as customer? The goal of facilitating the educational advancement of life-long-learners, in finding more rewarding employment, addresses one set of meta-narratives. But our emerging global community faces other pressing issues that revolve around two global challenges:

- the normative structure of our communities; and
- our relationship with the physical resources of our planet.

It is in these two domains that I regard the future of the global university to be headed. Building on the advancement of communities through educating individuals to be work-ready, the future also requires universities to more actively facilitate collaboration, both to frame the form of society we collectively want and need, and also work together to actualize that vision. Herewith is an overview of my main conclusions from my visit and my research.

*Problem, challenge or opportunity*

Managerial talk these days dislikes the use of the word 'problem'. As used above, I described our collective points of concern as 'challenges'. However, this presupposes perhaps my most significant observation from my time in the US. It is clear to me that for any 'challenge' to be addressed through innovation, and for that innovation to be successful – i.e. effective, scalable and sustainable - it is important for an institution (and therefore institutional leaders) to first clearly understand the landscape in which they find themselves and to understand one's relationship with that landscape.

Without such knowledge, no foundation exists by which the competing array of problems, challenges, opportunities, strategies and tools can be identified, measured, addressed or applied. Too many institutions are beguiled by the notion of innovation without first understanding either their own operating environment, or their desired place in the world. In addition to this problem, too many strive to be something they are not – the world can only sustain so many Harvard, Yale and Stanford universities, and there is no shame at being an institution that balances workplace training, research-*informed* teaching, and *aspects* of research-*led* teaching within their operation.

In other words, let us be careful when supping from the cup of university rankings – the rankings elixir can lead us to conformity of operation that does not sit well with our particular institution and does not serve our communities. So beware the temptation we have all felt at one time or another - of focusing on some new innovation in answer to a problem we do not understand and have not clearly identified. Let us not re-label 'problems' as 'challenges' until such time as we have clearly identified what impediments exist to our goals and objectives. It is clear, in my experience, that all the most innovative institutions in the US have these first-base issues nailed.

*Make it personal*

There is no magic sauce, no formula, no one-way or right-way, but there are a number of wrong ways. Whilst we all face the same mega-trends, our relationship with those is necessarily different. In case you missed it, Harvard University has a $30 billion dollar endowment and that changes the classification of problems or challenges for that institution. Digital innovation in pedagogy for example is an incredible opportunity for the likes of Harvard, it is not a challenge to their operating environment at all.

As a result, the way in which Harvard chooses to interact with digital innovation in delivery of courses (see EdX for example), is likely to be very different to a regional four-year institution or community college. All of the most innovative and dynamic institutions in the US have personalized the list of collective challenges - they are clear what each of those mean to their institution. They have achieved this by aligning those challenges with their history, community needs and their knowledge of the sector, to personalize their goals for the future.

Such an approach has allowed them to form a clear platform from which to assess innovation - what to adopt and what to reject. New Zealand, Australia and the rest of the world is not the United States. An alignment of the challenges we face, with our different institutional history, community needs and knowledge of the sector from our position will result in likely alternative but equally progressive goals.

*Sustainable innovation is not accidental*

Effective, scalable and sustainable innovation happens by design, it is not accidental. As indicated above, the examples of successful innovation that I examined in the US developed from both clear institutional goals and a clear process of institutional operation.

- President Michael Crow for example, was near-religious in his consistency of communication around the purpose and direction of Arizona State University – likely the most innovative university in the US. However, he is also clear on the structure and processes by which the institution structures its academic units and makes decisions.

- So too President Paul Leblanc at Southern New Hampshire University and ditto that at Purdue, Western Governors and Georgia Tech. It is crucial for university leaders to not only have a clear vision of the future of their institution but to also work together with their university community to align the operational with the mission.

A vision to work collaboratively with communities and industry on broad issues of societal reform for example, is put to naught if the institution is rigidly structured around isolated programmes that have little to no relationship with other programmes inside and outside their College, let alone society. And imagine for a moment, if our College Boards (Senates or Councils) operated as genuine units of research and development to produce a dynamic academic curriculum in which experimentation and progressive development were encouraged rather than the compliance and regulatory box-ticking regimes that predominates in many institutions. There is a clear need to have a flexible approach to the mission in the everyday operation of our institutions.

*The Multiversity*

Universities are complicated beasts, but it is important simply to embrace it. Clark Kerr coined the term 'multiversity' in the early 1960s. There is no one-size-fits-all approach to university operation and leadership. At any one time a university serves a tremendous number of masters and that is the beauty of our sector. What this means is that the commercialization of elements of university practice, on the one hand, need not mean an end to the development of a new theoretical narrative in the philosophy department by leading scholars, on the other. We are not corporate organizations yet have much to learn from the corporate world – we are also not entirely academically driven but that forms our backbone. We are hybrid organisations in a global environment where such complexity is the sign of the future. Therefore, we are not an anachronism of the past – we are the symbol of the future.

*Centres of collaboration; not purely centres of knowledge*

Traditionally universities have seen themselves as centres for the creation and dissemination of new knowledge: for me that is old world thinking. The future university needs to conceptualise itself as a centre of collaboration for the collective creation and dissemination of new knowledge. The former is the stuff of ivory towers – the latter is the fodder of change-agents. In the next Section I therefore explore models of transformational change from the leading institutions I visited in the US.

3.  **Models of Transformational Change**

From the above experience and consequential reasoning, I believe that the future of higher education (HE) is, actually, encouragingly bright – to the point where one might feel quite 'jealous' of youth, as we live in what I believe to be, perhaps, the most exciting of time in human history.

Global problems abound of course, but with that come opportunities to do things differently for the advancement and well-being of humanity; indeed, all life with which we share an existence on this planet. I therefore I highlight below the nature of transformational change in HE – a sector I feel privileged to be globally numbered among, as it transforms in collaboration with other sectors, to change the lives of entire communities and, as a result, our entire world. Let me highlight some leading examples.

The most important precursor to transformational change is the existence of a consensus over the need for such change. The challenges for HE, which I identified in Part I are, for some among us, simply not challenges at all. A $30 bn. endowment fund tends to influence the view one has about problems, challenges and opportunities. Other institutions may recognize similar challenges, yet actively address them by focusing on their traditional methodology and approach to teaching, research and community contribution. Our university system has been around for many centuries, after all, and slow incremental development has served us pretty well, so far.

There is, of course, no 'one-size-fits-all' approach to the *modern university*. It's a misnomer to believe that without radical and revolutionary change, all HE institutions will tumble around our feet. That is, I suggest, an unbalanced view. Change in HE is not all about the preservation of our institutions. It is also about contributing to a collective approach in meeting community and global imperatives, in light of the fact that failure to address such imperatives will have disastrous consequences for humanity. The current global pandemic emerging is the latest, and will not be the last, example.

We face, now, some imperatives which mean that, as a sector, we need to change – some institutions a great deal; others perhaps less so. The planet and humanity need our sector to embrace the truly great challenges before us, so as to ensure that we stand prepared to survive into the future. I believe that real leadership in tertiary education requires this:
- acknowledgement of the imperatives of our times,
- understanding of the exact position of our individual institutions,

- recognition of the ability of our institutions and communities to move, and
- commitment to push the parameters of our comfort faster than that imposed by the imperatives.

In this respect I focus on particular aspects of transformational change that I encountered within the US education sector. I structure these around the three elements of my project, enhancing engagement by leveraging digital and disruptive innovation, for the advancement of the imperatives and meta-narratives of our time.

*Engagement, recruitment & retention*
Much has been written on the role of universities in perpetuating inequality and class divide. Predominantly, HE is expensive and inaccessible. Generally, we subscribe too readily to 'human capital theory' where we equate *education* with *professional employment,* with *social mobility,* with *prosperity.*

The system however, is far from linear and is more organic. For education to be truly liberating, universities need to be more cognizant of the organic factors that lead to community well-being, and shy away from a more binary system of analysis. To focus first on mere wealth production – income from capital investment as outgrown wealth-creation from employment in the US, meaning societal, cultural and family position – is proving to be an increasing important factor in wealth-creation over employment.

A myopic concentration on employment as the only factor in the creation of wealth for example is, therefore, problematic for universities. Undoubtedly, education does equate to more and better employment outcomes, but it also provides many other important and tangible contributions to a healthy and wealthy society. Examples of colleges that are starting to recognize this, and which are actively engaging communities in different ways to ensure universal student success, include Georgia State and Arizona State. In their use of student analytics, and from a foundation of institutional flexibility, these institutions seek to ensure student success through institutional movement rather than a reliance on a traditional deficit model in which student difficulty is seen as a problem with the student.

As a result of their efforts, their figures of student success across ethnic and class divides are most impressive. If colleges are to deal effectively with engaging all quarters of our communities, when swathes of professions are rendered extinct over the coming two decades, then significant advancements need to be made in engaging the disenfranchised now. A recurring theme across the institutions I visited in the US was that we in HE need to learn how to engage more effectively with our communities. Surprisingly, universities are not hardwired to play nicely; our tendency is to tell communities, including industry, what we think they need. When we finish with them, we often leave them hanging in limbo, annoyed at what they believed was to be an ongoing and genuine partnership.

As an initiative to train their institution to effectively engage and disengage with the external community, I was impressed by the Gephardt Institute for Civic and Community Engagement at Washington University St Louis. They are doing credible work, built upon a focus on civics within the undergraduate academic curriculum. Seek them out for their wisdom and expertise in the area of collaborative community engagement. Staying with St Louis, I was also most impressed by Cortex in the heart of St Louis. Ravished by the GFC in 2008-9, the economy of this great city took a significant battering. Whilst innovation hubs are certainly not new or particularly novel, I found the foresight of Washington University St Louis, and its partners in establishing Cortex a number of years ago, to be both bold and visionary.

*Digital & Disruptive Innovation*
Here I focus on two aspects: digitally-enabled pedagogy and university funding. There is a great deal of digital-teaching innovation in operation in the US. But the success of Southern New Hampshire University, with their distance programme, is something to behold. With 90,000 online students (and growing) plus a sophisticated system of student support, analytic-driven intervention and guidance, and tailored career guidance, SNHU has shaken the traditional model of educational delivery. Of course the EdX initiative of Harvard and MIT, with its 140 international partners, is similarly impressive, albeit with more work required to find a financially-attractive platform for the Humanities courses they provide.

Disruptive innovation is strongly evident at the borders of traditional HE as well, with private providers such as LaunchCode and General Assembly providing coding courses, and facilitating work placements, in order to meet the insatiable demand for coding and web development expertise within the US. Clearly, in the context of the US, the mammoth size of the HE sector with its many thousands of providers allows for market correction, development and competition on a grand scale.

In the context of New Zealand, the sustainability of eight large, internationally-ranked universities, a struggling polytechnic sector, and a largely diffuse cohort of independent training-providers, is ripe for disruptive innovation. The NZ market needs a more secure foundation of regulation and guidance within which the various levels of HE can operate and innovate.

Digital innovation in all sectors, including pedagogical development, is a tool in the development of a mandate and mission. In the absence of the latter, either regulatory or institutionally-created, digital innovation can be seen as the answer to an unidentified problem, giving rise to increased chaos over clarity in the operation of the system.

*Imperatives and meta-narratives*
For clarity in thinking, I think it best to divide imperatives from meta-narratives.
- Community and global imperatives include global justice, sustainability, ideological intolerance, economic development, and multiple crises in biodiversity.
- These contribute to the creation of the meta-narratives of equality, inequity, entrepreneurialism, social enterprise, and all facets of sustainability.

While the provision of education for the purpose of fulfilling employment is important, and goes someway to fulfilling one imperative (economic development), it is certainly not the only pressing imperative of our time nor is it the only way in which education can contribute to their advancement. In my travel discussions, I found that addressing imperatives separate to skill-provision and employability appeared largely isolated from the more traditional structures of university operation. Occasional niche programmes looking at systems thinking or complexity theory certainly exist, but little action has occurred for programs to happen at scale.

Grand-challenge funding is starting to gain traction. But again, only a few universities are even contemplating novel ways of reconstructing the traditional Newtonian system of departments, programmes, faculties and colleges beyond traditional disciplinary lines.

What is needed is the servicing of more imperatives through the engagement of meta-narratives at scale. In this regard, I was most impressed by the Association for the Advancement of Sustainable Development in HE (Philadelphia). Their system for the nurtured development of university sustainability means that institutions wanting to advance sustainability, not only in their operation but also in their teaching, research and outreach, are no longer alone in doing so. From systems of top-down control, the creation of separate unencumbered university hubs/labs/incubators, to the seeding of bottom-up transformation, change comes in many shapes and sizes. Within the US, the size and diversity of the HE sector means that many institutions feel safe to sail above the challenges facing the sector as a whole, while others stand either ignorant or unable to move.

For a small band of universities however, which recognize the challenges and the opportunities of our times, great advancement has come in the development of the '*global university 1.5'*. Our challenge, I suggest, is to envision the '2.0' of our sector in which the employment of education for the resolution of the imperatives, grand challenges, and meta-narratives of our time can be woven, at scale, into the fabric of our systems. Our future requires HE to not only produce work read graduates, but also graduates skilled in the ability to change our community and global paradigms.

4. **Our voyage into the future**

Having argued that there is no magic sauce, no equation, no single road-map to university reform for the global age, I nonetheless maintain that reform does not, cannot, occur in the absence of design. Ultimately, my vision of the global university in the 21st century is one that sees institutions leveraging the strengths of our current paradigm for the co-construction of our common future. As such, while a strong employability focus acts to address one meta-narrative, there exists a plethora of other imperatives that cut to the core of nurturing future-focused citizens. And all this in the era of Covid-19.

While our graduates absolutely need to be employable on graduating, and our industries need educated employees to drive their innovation and development, they also need to actively engage in reshaping our societies to meet our local and global challenges – living within the planetary boundaries, stabilising the climate, re-establishing strategic stability, making nuclear weapons illegal, handling global health pandemics, dialoguing for common trust among political ideologies and religious faiths.

Despite observing extraordinary innovation in the US tertiary sector during my time there as an Eisenhower Fellow, it was clear that work still needs to be done to position universities at the fulcrum of our collaborative enterprise in humanity's progression towards peace, prosperity and well-being. For me, the *'university of the future'* is one that is connected to the local, national and global community through our collective enterprise of discovering solutions to our mutual challenges. And of course we grant degrees along the way. But we are not degree factories; we are here to help set and actualise the normative framework of society in the development of a closer, more secure, understanding, sustainable and prosperous future.

We need universities to help us ask and answer the 'why' questions. Universities can do this this by constantly challenging our perceptions of the future through an increased focus on collaboration in research and teaching so as to empower all walks of society in our mutual responsibility of creating and disseminating new knowledge. Universities ought not, therefore, see themselves as the sole creators and disseminators of new knowledge – as has been their tendency. They need to position themselves as *collaborators* and *facilitators* in the *collective* creation and dissemination of new knowledge.

Based on the above vision and reasoning, I set out below four recommendations on the fundamental characteristics of the university of the future.

### (a) *Principles, Vision and Plan (Inspire, Lead & Explore)*

The university in the 21$^{st}$ c. will not be an accidental educator conducting its business the way it does, because it is the way it always has. It will have clear principles, it will articulate an inspirational vision, and it will work to a plan. In the facilitation of change (which is, in reality, a never-ending condition), it will apply its principles, have the flexibility to modify and evolve its vision, and found its plans on the notion of agility. Institutional principles and vision will be informed by the meta-narratives of the time such as sustainability, equity, equality, social enterprise and entrepreneurship.

More specifically, the university will incorporate the themes of student success, equality of access, collaboration and partnerships, and collective problem solving and innovation, within both teaching and research. This will likely become manifest in commitment to diverse academic offerings – including systems thinking, a commitment to life-long-learning, and digitally added pedagogy if not the possibility of digital delivery by distance. The global health crisis of 2020 will ensure fundamental change in this direction, whether we choose it or not.

Similarly, in research, such principles and vision will likely focus on collaboration, 'grand challenges', and a mix of blue-sky research and the creation of patents and commercialization of innovation. Ultimately, universities will need to be proactive in their community leadership and should embrace their position as change-agent in contributing (if not leading) community discussion on the normative framework for our society in these times of rapid change and development – a discussion that is sorely lacking in our communities, leading to an inability for communities to disagree well, and forge unified pathways to address communal problems.

### (b) *Budget & Structure (Ensuring structural agility)*

In order to inspire, lead and explore, universities will need to ensure they have sufficient agility to move, and the drivers and incentives in place to feed the creativity of academics, professional staff and students alike.

There is no 'one-size-fits-all' of university operation – the strength of our institutions is that we are genuinely '*multiversities*'. Diversity is to be encouraged, and in fact nurtured, albeit within the envelope of clearly articulated and agreed principles, vision and plan.

To effectively support staff and student innovation, the university in the global age will need to ensure authenticity in its mission, and not regard its principles and vision as a mere branding exercise in which a new batch of modern managers and corporate marketers clothe old structures in new garments. Tangible action will be taken to encourage collaboration in both research and teaching. Diversification in the internal budget mechanisms of institutions will need to occur to discourage hording of students and any nervousness toward collaboration. Cross-subsidization will always be a reality in a university. Business schools will likely always contribute more than science faculties. Tension will always exist, but a general balance of fairness and equity needs to occur in which innovation and development is rewarded and the playing field of competitive funding is at least transparent, if not 'fair', in light of identified priorities in spending.

As with the mechanisms of internal budget allocation, there is no magic formula in terms of structure. However, it is clear that structures will need to change. Future universities will not be bound to the traditional Newtonian approach to disciplines operating in isolation to one another and grouped together under outdated constructs such as 'Humanities', 'Sciences', 'Business', 'Health' and 'Creative Arts'. The addressing of 'grand challenges' and greater connection with society (social, industry and governmental) will require the rebirth of multi-disciplinarity and will result in the extinction of many contemporary degrees (and disciplines) and the creation of new areas of research and teaching interest based upon systems thinking and complexity theory. These latter approaches will also occur at scale – something that frustratingly eludes contemporary institutions.

### (c) *Academic Decision Making*

For many, our academic decision-making structures seem to strangle academic independence and creativity. Rather than research & development centres concerned with the creation, development and maintenance of a dynamic future-focused

teaching and research curricula, our academic boards or faculty senates are often more concerned with ensuring compliance and regulatory adherence.

The future university will flip its academic decision-making processes by genuinely resourcing and prioritizing the academic boards as the institution's centre of research and development. These boards will likely be small, (12-15 members), with members appointed on merit and from all levels of the academic, professional and student body. They will be charged with the authority to co-create the academic agenda for the institution in partnership with senior management. Furthermore, it will act to empower the important aspects of institutional operation such as risk management, health and safety, and business case creation to be ministries of '*how can we work together to make this happen*'.

> ### (d) Innovation & Collaboration

In establishing themselves as collaborators in the creation and dissemination of new knowledge, the university in the global age will wed its fate to its community. University communities include staff and students as well as stakeholders, civil society and even the planet. Such universities will co-develop with local government and industry, and will plan to ensure campus as a community resource. In other words, they will leverage public-private partnerships to build infrastructures of significance to their region. The university will seek to join forces with local government and industry to lobby for an international airport. A maligned regional town to avoid? The vitality of the town will be recognized as inseparable to the fate of the university.

They will collaborate with local health providers to win lucrative construction grants and develop new approaches to health care delivery in the region. They will co-ordinate with local government on rejuvenation projects, public transport and housing initiatives, improve water quality, recycling and wider education initiatives. The future university will make it a badge of honour – perhaps even a principle – to stand 'with, for and by' their community in everything they do. Management will seek to seed projects and innovation within a supportive and encouraging environment – rewarding success and accepting failure. They will be clear on their risk tolerance, and in what circumstances risks ought to be taken. They will not merely seek to establish an entrepreneurial hub or innovation lab ("*because the competition has one and we must keep up*"). It will seek to nurture the philosophy of innovation across the entire institution.

## 5. **Conclusion**

I have a vision for the tertiary sector – not merely for New Zealand but the globe. My vision was tried in the fires of the Christchurch earthquakes, and inspired by the leadership of students from whom I learned a great deal on effective community engagement. As a planet we have numerous imperatives. As people, we have near unlimited capacity for innovation and development. Universities, I believe, sit at the intersection of these realities – if universities cannot leverage their incredible tradition and strengths to do something great for all humanity then I am not sure any sector can. I look forward to an ongoing discussion on the development of the future *'university in the global age'*.