

## Submission to the Universities Advisory Group

*Third tranche of 12 questions – due 18 December 2024*

### Introduction

This feedback represents the views of Universities New Zealand – Te Pōkai Tara (New Zealand Vice-Chancellors' Committee), a statutory body comprising the Vice-Chancellors of all eight universities.

To discuss any matter raised in this submission, or for further information, please contact Chris Whelan, Chief Executive, Universities New Zealand – Te Pōkai Tara at 024-242-5886 or [chris.whelan@universitiesnz.ac.nz](mailto:chris.whelan@universitiesnz.ac.nz)

This submission answers all 12 questions posed by the Universities Advisory Group (UAG) but clusters some of them to help with communicating the response of the Vice-Chancellors.

In reviewing our responses to the questions there are some overarching messages we ask be kept in mind. These are:

1. New Zealand's universities do as well or better than all the overseas systems we compare ourselves against in areas such as quality of teaching and research, and graduate outcomes. But because of funding declining in real terms over much of the past thirty years, we deliver these outcomes at just 88% of the OECD average. Australian funding per student is 37% higher than New Zealand. The UK is 85%, and the US, 100% higher.
2. New Zealand universities have achieved this through a wide range of strategies, including new technologies, different organisational models, and pan-sector collaborations.
3. Although funding increases have not kept up with cost increases over much of the past thirty years the problem has only become acute in the past five years with inflation running at 25% and Crown funding at less than half that.
4. Further savings are possible within individual universities, but they are taking more time and money to realise and producing smaller returns. Further savings are also possible through additional collaboration across the sector, but that will take upfront investment for uncertain middle-term returns.
5. There are some settings that will help universities somewhat and these are detailed in this submission. They include:
  - a. Provide universities with longer-term funding signals to help with long-term planning.
    - Move funding to a rolling three-year average to even out some of the volatility associated with short term changes in student and research funding.
    - Put all universities on three-year investment plans
  - b. Take some funding out of the volume-based funding system.
    - For low demand strategic programmes provide funding on an actual cost basis.

- Help get some new strategic programmes to the point where they are self-sustaining by underwriting.
  - Fund some key challenges directly – areas such as ICT infrastructure, or student support and mental health.
- c. Incentivise collaboration where it will advance a national priority and is likely to generate efficiencies.
- Provide funds for the sector to work up and evaluate different business models.
  - Create a strategic transformation fund for most or all universities to jointly make cases for investment.
  - Encourage a national consortia agreement to facilitate more collaborative technology-driven delivery of some programmes.

**Question 1: Given the realities of the current fiscal constraints how could the University system evolve to be more efficient? How could its components evolve to be more efficient? In particular**

**(a) While understanding that institutions have already made some hard decisions, what reprioritisation might further be considered within your institution to do so if funding is not increased? What would be the criteria for reprioritisation? How would the approach be different if a more system wide approach is taken?**

**(b) Treating the sector as a system what might be reprioritised or changed to achieve greater efficiencies? What would be the criteria for reprioritisation?**

In our responses to the UAG's second set of questions, we noted that every international benchmark we have access to shows that New Zealand universities are high quality, do excellent teaching and research, and achieve excellent graduate outcomes.

This has been achieved in a context where, for most of the past thirty years, university costs have risen faster than government funding.

Universities have responded by managing their costs down. In part they have done this by using their domestic and international networks to identify and implement new organisational models, new technologies, and better processes and practices. Universities have used cost management tools to identify and manage out academic programmes that do not pay for themselves. Universities have also worked hard to grow revenue from both students and research by investing in ensuring quality and relevance in their offerings.

A consequence of this is that New Zealand universities are now some of the most efficient in the world. Our benchmark data says our research is world class and our teaching results in some of the best employment outcomes of any system we have data for. We do this with per-student funding below the OECD average.

**OECD’s 2024 Education at a Glance – Table C1.1: Total expenditure on educational institutions per student (2021)**

<b>\$US</b>	<b>Bachelors, Masters &amp; Doctoral</b>	<b>Tertiary Incl R&amp;D</b>	<b>Tertiary Excl R&amp;D</b>
United States	<i>Not provided</i>	\$36,274	\$31,160
United Kingdom	\$33,822	\$33,574	\$27,234
Australia	\$27,941	\$24,837	\$17,094
Canada	\$27,596	\$24,406	<i>Not provided</i>
<b>OECD Average</b>	<b>\$22,096</b>	<b>\$20,499</b>	<b>\$14,077</b>
New Zealand	\$19,300	\$18,082	\$13,658

All universities strive to ensure value for every dollar and maintain quality provision. However, within a constrained funding environment for many years, the options for further efficiencies have become more challenging.

- They have already implemented a wide range of shared services across areas such as joint procurement, benchmarking, quality assurance, research infrastructure, common licensing, etc.
- They can and have been deferring some expenditure (maintenance, capital works, salary increases, etc) but these have long-term consequences and cannot continue indefinitely.
- Universities can accelerate some works that have longer-term savings (more efficient buildings, smarter technology systems, etc) but these will not address short-term funding gaps, and they will take time and money to bring onstream.
- Universities can also borrow or sell and lease-back assets but these both defer the funding problem and create even higher long-term operating costs.
- Universities can and will also continue to seek efficiencies by reorganising structures, roles, processes, and operations, but the changes that will generate large savings have already been implemented. Although opportunities for further savings are still there, they are taking an ever-increasing amount of time and effort to realise for diminishing returns.
- Universities have already cut many academic programmes that are not paying for themselves through tuition revenue. Although all universities subsidise some programmes because they are an essential part of some larger qualification, most are programmes that cover their costs and that contributed to shared services (ICT, buildings, libraries, etc). Under the current volume-based funding model, cutting these programmes will just worsen the financial position of a university.

Within this context, a drive to push for increased cost savings creates a series of potential risks.

1. Reducing spending on the people and systems that provide support services across areas such as student support, quality assurance, risk, health and safety, facilities support and management. This creates risk and puts a system already under pressure under more pressure. And/or
2. Cutting the programmes that are not currently profitable, but that have been seen as strategically important. These are programmes that play a role in interdisciplinary or cross-disciplinary research, for example, or because of their economic, social, or cultural contribution to the regions around the university. These also include programmes that are seen as having potential to be profitable in time. Cutting these:
  - a. reduces the ability for universities to offer interdisciplinary and cross-disciplinary qualifications and research.

- b. forces more students to travel if subjects are no longer available locally. This increases the cost of their education which also increases the risk they will not complete their education.
  - c. it reduces knowledge transfer and research being carried out in these disciplines – with costs for local industry, civil society, and local government.
  - d. it forces universities to let go of often very talented teachers and researchers.
3. Incremental (non-strategic) cuts (*such as shaving a percentage across all budget lines, and/or not replacing staff who retire/resign, and/or cutting budget lines such as travel, conferences, and/or subscriptions, etc*). These cuts increase pressure on remaining staff, increase operating risk, undermine quality, and impact on cross border knowledge exchanges and research collaborations.

Across the sector 54% of university expenditure is on people. Although there are differing views as to the relative value and priorities of the range of teaching and research carried out across our universities, the fact is that all our teaching and research has evolved in line with student demand, research contracts, and other funding sources. The diverse mix of teaching and research reflects the role of universities in a world that is increasingly focused on developing skills and thinking that is interdisciplinary and multi-disciplinary.

The market for academic talent is global. We start to lose our best academics when they become concerned about their futures, and/or they start seeing a decline in their ability to do research or a drop in their university's rankings for their particular subject area. Once we lose them, we know that it is almost impossible to get them back.

We will also see an increasing impact on our long-term research capability if we are unable to adequately invest in our early career research workforce. The early career research workforce already faces significant insecurity – working from research contract to research contract until they can land an open tenure role. Fewer research contracts will see fewer people seeking careers in research, and less research funding will see less support for the research of our early career academics and less ability for them to develop the reputation and skills necessary to gain external research funding.

We are also running up against hard financial constraints as to the amount of support we can put around our students – particularly those from Māori and Pacific backgrounds – and the support we can put around masters and PhD students once eligibility for living allowances cease.

Although we do not see significant opportunities for either easy or quick savings, there are longer-term options worth exploring – such as those indicated in the answer to Question 3 below. All would take time to investigate and verify.

The university sector in the United Kingdom was facing similar pressures in 2011 and set up an efficiency task force with Government agreement. A number of promising opportunities were identified. Something similar might be explored here.

## Questions 2 & 4:

2. **What changes to the investment planning system should be considered to improve its efficiency and effectiveness?**
4. **How can university funding be more responsive to changing enrolment levels and delivery models and ensure universities are responsive to current and future skills needs?**

We suggest five overlapping areas of focus.

### **Change 1: Reduce funding volatility associated with competitive volume-based funding**

Around 77% of university income was ‘volume-based’ funding in 2023. This includes:

- 57% - student related funding through fees and tuition subsidies.
- 20% - contestable research funding.

This volume-based funding was a deliberate feature of the current funding system when it was implemented in the early 1990s. The market reforms of the 1980s saw the higher education systems of countries like the UK, Canada, Australia, and New Zealand all deliberately set up along competitive lines – requiring universities to compete for students and research funding by demonstrating relevance, quality, and value for money in their offerings.

In the main this model has served this country well with every metric showing teaching, graduate outcomes, and research quality as being world-class.

However, it has made universities overly dependent and exposed to short-term shifts in student demand and research grants.

One option that the UAG have suggested is shifting some DQ7+ funding to another bulk fund like PBRF.

Although the concept is desirable, it would have to overcome some significant challenges:

- **Challenge 1:** Universities with short-term drops in student demand will be insulated against those drops, but universities with short-term domestic student increases will end up with less funding per student than under the current system.
- **Challenge 2:** There is genuine public and cross-party support for maintaining the quality of teaching for students. There is less support for funding institutions. It is easier for a minister to defend an increase in tuition fees and tuition subsidies to his or her Cabinet colleagues and the media than it is for them to defend an increase in funding for administrators and buildings. Block funding only works if it is index linked. There is a real risk that long-term increases to core funding might end up moving at a different rate to student funding – as has been the case for PBRF which has not moved since 2018.
- **Challenge 3:** Taking funding out of DQ7+ may make reduce the incentives for universities to establish new programmes as the marginal income from per-student funding may be insufficient for the programme’s viability.

We can really only see one option that would avoid these risks while also reducing volatility in the volume-based funding system. We recommend moving DQ7+ funding to a rolling 3-5 year average. This would retain the volume-based funding model but reduce the short-term volatility by giving universities clearer middle-term funding signals to plan towards.

A rolling funding system would need a little more flexibility in out years. At present, investment planning allows for some under and over-recruitment of students with universities being funding for 99%-102% of whatever has been agreed in their investment plan. That might be broadened to 98%-103% in a second year and further still in a third year.

However, on a much more limited basis, we do also see value in funding settings that would reduce volume-based risks associated with a small number of strategically important programmes. Where there is just one provider of a programme in a region, and provision of the programme is seen as essential, and either the programme is not at the scale where it is financially viable under DQ7+ funding, or where EFTS demand is volatile or uncertain, we would support the majority of funding being on a fixed sum basis to cover core costs.

For example, there might be one national provider of a postgraduate qualification in quantum computing. The fixed costs of supporting the first student in the programme might be \$200,000 and the marginal/variable costs of each additional student might be half the normal DQ7+ funding rate. The programme would be bulk funded for fixed costs and receive DQ7+ funding on a discounted basis. See the 'Getting to Scale' section below for more on this.

This model was adopted in the United Kingdom for 'strategically important and vulnerable subjects'. This was a defined list of subjects that was kept under periodic review. The subjects were provided with earmarked capital and recurrent funding to sustain provision. The UK reports that the approach was sound, but that funding for it has become squeezed over the years.

### **Change 2: Improve the long-term funding signals**

Linked to reducing funding volatility is the need to improve long-term funding signals.

At present changes to funding are done year by year with announcements in changes to DQ7+, domestic student tuition, PBRF, and Crown research funding generally not known until the May Budget announcement each year. Until then, universities do not know if the following year's funding will be flat, up, or down.

Unpleasant surprises, such as decreases in funding, nil-increases, or increases well below CPI often require universities to act faster than is optimal to ensure they have a balanced budget for the following year.

There would be benefit in Government signalling intentions over a multi-year period. We suggest one or both of the following:

1. A rolling 3-5 year statement of funding aspirations – outlining what a Government hopes to provide by way of funding to the higher and further education systems. This might be as simple as a broad commitment to maintaining funding in line with CPI but making this subject to the overall fiscal environment.
2. For Vote Tertiary Education, move to use of multi-year appropriations for the non-departmental output expenses relating to open-ended provision of teaching and research.

Linked to this is the reduction in funding certainty that results when the Tertiary Education Commission (TEC) sets investment plans for institutions at less than the maximum three years allowed.

The Tertiary Education Commission has relatively few levers for driving provider performance. The one they have been increasingly relying on in recent years is the ability to set investment plan terms of less than the full three years allowed.

Reasons for shorter investment plan terms have generally related to factors such as how a university is doing on their student success and parity goals, or how universities are doing on key Educational Performance Indicators (EPIs)<sup>1</sup>.

Although we appreciate that the TEC is pursuing a number of public-good objectives in these targets, they are having the effect of reducing long-term planning and certainty and they undermine the ability of universities to commit to the sorts of public-good outcomes the TEC actually wants to incentivise.

Unless the TEC's financial monitoring framework indicates substantial risk or uncertainty around a university's financial viability, governance, or management, investment planning should always be for the maximum period allowed.

If all universities were on a three-year investment plan cycle, there could also be value in aligning the cycles so all universities create new investment plans in the same year. This would enable the TEC to be more strategic in assessing and responding to shifting demand and priorities.

There could also be value in the TEC moving to a rolling investment planning model. This might see investment plans done to a four or five year cycle (with the existing range of in-term amendments/adjustments continuing to allow fine-tuning each year), and with the plan renewed every three years – so universities have changes signalled a year or two in advance of them taking effect. This would also reduce uncertainty and assist universities with planning.

### **Change 3: Help universities get programmes to scale**

The volume-based funding model incentivises universities to focus on developing and offering qualifications where there will be demand from both students and employers. However, it also

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<sup>1</sup> Although it is not directly relevant to funding, universities have advised governments over the past decade that the current Education Performance Indicators (EPIs) used by the TEC to measure provider performance cause more harm than good and should be replaced. The EPI measures are (a) first year retention rates, (b) cohort-based qualification completion rates, (c) course completion rates, and (d) qualification progression rates.

The most important metric from the perspective of the university sector is the first EPI that tracks first year retention rates. The assumption in this metric is that students who do not complete their first year of studies have been failed by the university. Although this is true in a small number of instances, for most students the data shows they have just decided to do something else.

UNZ is close to publishing some IDI-based research showing what happens to students who exit university at the end of one of their first three semesters. In summary, of the 17% of students who exited during a five-year period from 2015 to 2019:

- 29% enrolled at another university – mostly having travelled away from their home region to go to university and mostly returning back to their home region to go to university in their home region.
- 16% are studying with some other provider (7% degree, 7% sub-degree, 2% industry training)
- 32% are in employment
- 6% are overseas
- 3% are on a benefit
- 13% cannot be located (they are not enrolled, employed, or on a benefit).

We recommend looking at some alternative to the current EPIs for assessing how well universities do in supporting their learners if they continue to link EPIs to investment plan terms and decisions.

means that universities need to be somewhat conservative when establishing new programmes.

When a university establishes a new programme it necessarily commits to a number of long-term costs associated with teaching in the expectation that student numbers will reach a level where the programme is financially self-sufficient.

Proposals to establish new programmes always include a budget that details projected student numbers and the costs of teaching those students. The cost of teaching the first student is typically many times the cost of teaching subsequent students. Costs also tend to increase in steps – so a new qualification might need five staff to teach the first student and might only add a sixth staff member when student numbers grow beyond a certain number.

Proposals to establish new programmes typically have a degree of optimism bias when it comes to projecting student demand. Generally, it is impossible to either prove or disprove student demand, and judgement is required. In considering whether to establish a new programme, university management and governance necessarily have to consider the risks if projected enrolments do not materialise. Universities typically have to ‘teach-out’ students accepted into a programme or qualification. That might take 3-4 years and, over that time, the university will be subsidising a programme where costs exceed income.

This creates a ‘getting to scale’ challenge for universities. They need to be reasonably sure that a new programme is likely to be able to pay for itself before committing to it. This is particularly true during times of financial pressure when universities need to be more risk averse.

This risk aversion is greatest where (a) the establishment and operating costs are particularly high because the university needs to recruit skills it does not already have, or to commit capital to buildings or equipment, and (b) where student and employer demand is uncertain.

This risk aversion is likely to be problematic in areas that may (or may not) be of national importance in coming decades, but where establishment costs are high, and demand is unproven. For example, it is not clear at this point exactly what the country needs in areas such as quantum computing, synthetic biology, and artificial intelligence.

Similarly, there are other strategic lower-demand programmes where income may never match costs or where the broader economic, social, and/or cultural value of having a programme operating warrants Government either underwriting or cross-subsidising it.

We suggest that the TEC be able to allocate DQ7+ funding on either the existing fully variable basis, or through a new ‘Strategic DQ7+ funding channel’. We think that this strategic funding channel should allow for the TEC to use one of the following:

1. Ongoing underwrite – the TEC commits to covering the fixed cost of the programme (the amount to teach the first student) and then funds just the average marginal cost of subsequent students (for example \$X00,000 plus half the standard DQ7+ rate for each EFTS). This would be used for programmes where demand is unlikely to ever cover costs.
2. Time-limited underwrite – the TEC commits to covering the fixed cost of the programme for a finite period of time (X years), or until enrolments make the programme self-sustaining.

#### **Change 4 - Get the incentives better aligned**

In previous submissions to the UAG we have signalled a number of other areas where incentives could be better aligned to unlock more value from the funding system.

In the UAG Briefing Note on the PBRF we suggested:



- Identify long-term research priorities (15-30 years) and focus investment on research infrastructure and developing a research workforce in line with these.
- In the middle term (5-15 years) focus applied doctoral scholarships, and postdoctoral fellowships on developing a research workforce that will support the long-term priorities.
- Funding settings should allow for universities to provide early career researchers with security of employment where their skills are aligned with long-term research priorities. This would require shifting some money out of volume/project driven research funding into core funding.
- The metrics for assessing returns from PBRF funding should align with things that politicians and the public care about. They should demonstrate the return on investment from PBRF and support the case for further investment.

Drawing these points made in the PBRF briefing note together with the points made above in this submission we suggest:

- Where long-term research priorities are identified in areas where there are few or no undergraduate and postgraduate programmes leading to doctoral and postdoctoral qualifications, then creation of these programmes should be encouraged through underwriting.
- Maintain a pool of ring-fenced funding for applied doctoral research doctorates (a) done with and for end-users to address real world needs, and (b) that develop a research workforce aligned with long-term research priorities.
- Reduce insecurity of early career researchers working in priority research areas. Move some of the volume-based funding they are currently employed on into ongoing core funding.

#### **Change 5 - Fund some key challenges directly (outside of volume-based funding)**

If the UAG is keen to pursue the idea of some ring-fenced core funding, an option could be funding targeted to key challenges/needs that universities are currently struggling to satisfy under existing funding arrangements. Investment in any or all of these types of areas would reduce the university sector's dependence on volume-based funding and could potentially offer efficiencies and savings. The following are examples:

- i. **ICT infrastructure through a new funding channel outside of SAC/DQ.** A consequence of the long-term real decline in funding has been underinvestment in information technology for teaching. Universities are struggling to deliver the technology enriched and supported learning environments that are now a common feature of universities internationally. This includes simulation environments, immersive learning environments, teaching environments equipped with real world systems and tools, near campus learning environments, smart systems to better monitor student wellbeing and achievement, and tools and infrastructure to better support lifelong learning.
- ii. **Student support funding.** An increasing number of students cannot rely on family support and have real and substantial financial challenges to successfully participating in their studies. This ranges from inability to provide themselves with laptops and internet access through to short-term challenges paying for accommodation and food. The COVID period showed the value of having Government funding available for universities to disburse on a matched dollar for dollar basis with university's own hardship funding. We suggest making this arrangement permanent with ongoing baselined annual funding available for universities to draw from.
- iii. **Mental health and wellbeing funding.** Though universities are primarily funded for teaching and research they are increasingly having to take on the role of health providers dealing with a growing number of mental health challenges. A decade ago, 9.5% of

university students were accessing mental health services. By 2021 this reached 13.8% with a growing number of students presenting with serious and acute challenges. The sector is not resourced for this, and the public health system is increasingly also struggling to take on student referrals. Additional dedicated ring-fenced funding for mental health and wellbeing services would take pressure off universities and potentially reduce costs to the public by improving the overall resilience and wellbeing of graduates entering the workforce.

These are all areas that could also be explored through some sort of sector-led investigation and assessment process (see answers to questions 1 & 3).

**Question 3: What changes to the current funding system would be desirable to reduce areas of excessive competition and promote greater collaboration among universities?**

The reforms of the 1980s saw public universities in UK, US, Canada, Australia, and New Zealand all set up under funding models that required them to operate on market-oriented grounds. They were (and still are) expected to compete for students by offering relevant qualifications and a good student experience. They were (and still are) expected to compete for research funding to make it more likely that research would be relevant, high quality, and useful.

Funding systems in these countries have evolved over time to reflect evolving public policy priorities and to incorporate new ideas and theories. But they all remain broadly focussed on making universities compete for students and research funding by making most of the funding volume/demand based.

Competition is a feature of the system. It encourages innovation and focusses universities on meeting the needs of their various customers. However, a necessary consequence of competition is that there will be some duplication of offerings nationally and regionally, and some money spent communicating and differentiating (marketing) each university's offerings to students.

The role of Government is to exercise control through governance, price setting, limiting enrolment, and monitoring and regulatory agency oversight.

The UAG has not outlined where it sees competition as being 'excessive' – where the costs of competition exceed the benefits. Without this being identified it is difficult to suggest options where lessening of competition would be better overall.

Universities already collaborate extensively across areas such as common ICT infrastructure (REANNZ), joint procurement, common licensing arrangements, joint projects, common quality assurance, professional development programmes, joint benchmarking, etc.

We do see a number of other areas where further collaboration could be explored. These might include any or all of the following:

- a. Joint systems and services for online teaching and learning. It might be more effective and efficient to have a common platform, common standards, and machinery for collaboration in course and programme delivery between higher education providers.  
*[See the answer to question 5 for more thinking about this]*
- b. Common/joint capability for design and implementation of specialist capital works programmes (facilities & bespoke IT systems).
- c. Shared admissions processing to simplify student application and admissions across the universities and to reduce costs across areas such as marketing, and ICT.

- d. Co-locations, and/or shared services, and/or mergers of crown research institutions into universities.
- e. Some vocational education delivered through the same sort of Dual-Sector model operating in parts of Australia.
- f. International education policy and operating settings to help with diversification across products and markets.
- g. Extending the existing range of shared service arrangements. As outlined above, New Zealand universities already collaborate across areas such as quality assurance, procurement, insurance, cybersecurity, and professional development. But there are some other areas where collaboration appears to offer benefits overseas that might be worth further investigation. These include areas such as general legal counsel, audit and risk, project monitoring and evaluation, etc.

A problem for university systems internationally is that talk of becoming more efficient and seeking different ways of operating tends to line up with periods of financial challenge. Efficiency takes investment and it takes time to realise. New Zealand universities have neither the capital nor the time to pursue these initiatives. The right time for this sort of investment is when times are good, not when the sector is running deficits.

We think that a key role of Government could be to encourage collaboration – particularly in areas where both efficiencies and better public good outcomes are likely.

One option could be that Government could provide funds for the university sector to work up and evaluate different business models. Evaluation should include likely financial and economic returns to universities and the public and this should inform co-investment decisions.

Another option is for some sort of strategic transformation fund that would enable the sector to make the case for additional investment which would stimulate or realise major efficiencies and improvements to university deliverables. Such a fund might require most or all universities to participate in bids.

The areas outlined in Questions 2 and 4 for potential collaboration are good examples of opportunities for strategic transformation.

**Question 5: What changes to the funding system would enable a shift to more collaborative, technology-enabled delivery of some (and which types of) programmes?**

In the UAG's second question set (due 30 August) you posed Question 11: *How could teaching and research in academic disciplines with low demand best be supported in New Zealand's university system?*

In our response we suggested three approaches based on utilising the blended/hybrid learning and fully online learning models that now sit around most university courses.

For any of them to work, however, the funding system would need to incentivise collaboration and there would need to be operational agreements fostered and supported by the TEC to help get collaboration to scale.

There are a number of overseas models where consortia agreements operate allowing (or requiring) students to gain a qualification from a home university that includes credits gained through another host or partner university. Examples include:

1. **European Universities Initiative** – aims to create bottom-up networks of universities across the EU which will enable students to obtain a degree by combining studies in several EU countries. Students are able to build their own curricula to develop qualifications that are cross-disciplinary. Practical and/or work-based experience is included. Each qualification must include credits from at least three higher education institutions from different parts of Europe.
2. **Nordic countries** (Denmark, Finland, Iceland, Norway, and Sweden, with involvement by Greenland, the Faroe Islands, and Aland) – The Nordic Masters Programme is for joint masters programmes involving at least two universities. Goals are to encourage cooperation between higher education institutions, to internationalise higher education, and to help students create useful networks. There are currently 22 masters programmes on offer. One example is the Masters in Viking and Medieval Norse Studies offered as an interdisciplinary programme by five universities or institutes – with the first two semesters at a prescribed university, then a third semester at any of the five partners, and the final two semesters writing a thesis. This looks like a variation or extension of the European Universities Initiative (above).
3. **The Five College Consortium** (United States - Amherst College, Hampshire College, Mount Holyoke College, Smith College, and the University of Massachusetts Amherst) – Students can take courses at any of these institutions while being enrolled at their home college.
4. **Webster University:** (United States) – Webster university has partnered with several community colleges in the St. Louis area, allowing students to take courses at these colleges while being primarily enrolled at Webster.

Consortia agreements take a wide range of forms, but appear to always include the following elements:

1. The student enrolls at a 'home' institution. The home institution:
  - a. Tracks and aggregates credits gained at the home and host institutions and oversees progress towards the qualification.
  - b. Awards the qualification once all necessary credit requirements are fulfilled.
  - c. Is responsible for all work associated with student loans and allowances.
  - d. Is responsible for learner support and pastoral care where the learner is studying with the host university online.
2. The 'host' or 'partner' institution:
  - a. Provides all agreed information to the home institution. This usually includes verification that the student is enrolled and progress reporting on credits gained and grades achieved.
  - b. This may include information necessary for the home university to know if the student is making adequate progress and/or requires additional support.
  - c. Is responsible for learner support and pastoral care where the learner is studying at the host university in person (a semester or two 'abroad').
3. Under some consortia agreements the student enrolls directly with the host/partner university for their credits and pays fees to the host/partner university. Under other agreements, all fees are paid to the home university and then the home university disburses the fees through formulas detailed in the consortia agreement.

A barrier to a consortia agreement of this sort in New Zealand is current TEC and Studylink settings that put a number of limits on students and education providers to prevent issues in

areas such as potential double-dipping for funding and entitlements and unclear responsibilities around student wellbeing and safety.

With some modification of these requirements, New Zealand universities could potentially develop a consortia agreement that would encompass any or all of the types of overseas models listed above.

This would make it easier for universities to collaborate on the provision of strategic low demand subjects and it would make it easier for students to access a wider range of courses and specialisations that is always possible through their home university.

Under all circumstances, a consortia agreement should include near real-time transfer of information in an agreed common format to assist home universities in understanding where additional academic or pastoral support may be required and to identify potential scheduling clashes (when assessment is due or when exams are scheduled)

### **Question 6: How could funding arrangements for universities better address barriers to learner success?**

The current volume-based funding system has two relevant sources of funding for supporting learners:

- DQ7+ - \$1,655.3m (Universities only)
- Equity funding (Level 7 and above) - \$16.9m (All publicly funded tertiary providers)

DQ7+ funding provides the core funding required for learning and teaching across each discipline area – less for classroom-based subjects like law and accountancy, and more for capital intensive programmes like engineering and medicine. DQ7+ funding rates mostly retain the same relativities they had when they were first set in the early 1990s, but with some adjustments over time to STEM subjects where capital costs have increased faster than DQ7+ funding rates.

The DQ7+ funding rates overall have increased at about the level of CPI over the past twenty years. Over the same period the proportion of the population coming to university has increased significantly and the profile of students and their readiness for university has changed significantly.

Equity Funding has the enormously worthy goal of improving participation and success rates for Māori, Pacific, and students with disabilities, but the amount paid per student is woefully insufficient. For Māori and Pacific it is \$355 per EFTS (in 2024) when studying at levels 5 (diploma) to 7 (degree) level, and \$494 per EFTS at levels 8 (honours) and above. For tertiary learners with disabilities it is just \$31.73 at all levels. Although universities are expected to cross-subsidise these with DQ7+ funding, the reality is that this funding is highly constrained and there are many demands of it.

There are opportunities to better meet the needs of students, employers, iwi, and other communities with different funding systems better aligned to learner needs. All are likely to improve numbers of students who can successfully participate in university education and to improve post-study employment outcomes – with good returns on investment to the Crown from higher earnings – leading to higher returns in income tax, goods & services tax, and company tax.

Universities have previously suggested replacing Equity funding with something better targeted to student needs. We know that students who gain at least 90% of their credits at first year have

more or less that same chance as all other students in successfully completing their overall qualification.

UNZ did extensive work in this area in 2018 and 2019 and again in 2023. We know from that work that NCEA grades predict about 89% of the academic performance of students at university.

When students are sorted into quintiles by their NCEA results, the bottom (fifth) quintile is disproportionately at risk of not gaining the necessary 90% of first year credits, followed by the second bottom (fourth) quintile.

Māori and Pacific students are disproportionately overrepresented in the bottom two quintiles.

We suggest equity funding would deliver a better return to the country if it was targeted by quintile – around \$5,000 for first year students in the lowest quintile, and around \$1200 for first year students in the fourth quintile. This would be sufficient to ensure adequate academic support for the students who need it.

**Question 7: Does the current system have the right balance of public (tuition subsidies) and private (student fees) contributions to the cost of university education, and what changes should be considered to tuition fee arrangements for domestic students?**

### **Student fees and loans**

On average students pay around a third of the cost of their qualifications through fees and the Government pays the other two-thirds through tuition subsidies (DQ7+ etc). On top of that, the Government pays allowances and allows students to borrow to cover tuition costs.

In the most recent Student Loan Scheme Annual Report 2023<sup>2</sup> the overall Crown loan balance was \$3.882 billion, with 82% of students having borrowed to cover tuition fees, 59% having borrowed to cover living costs, and 61% to cover other course costs. The average leaving debt for the 82% who took out any loan was \$37,230. Long run, the scheme reports 80% of loans are repaid over an average of 7-8 years.

The cost of lending for the interest-free loans scheme is 43.35 cents in every dollar. Most of this cost is the Government's cost of borrowing to cover the interest free element of the scheme.

People with a loan living in New Zealand automatically start repaying their loan once they are earning more than \$24,128. An additional 11% is deducted by their employer as part of PAYE on top of any other taxes. This is why loans are repaid over just 7-8 years on average.

The current system of fees and loans has been developed over a long period with broad cross-party political support. It balances two key policy objectives around (1) ensuring ability to pay is not a limit on people being able to go to university, and (2) ensuring people who benefit from a university education contribute towards the cost of it.

We think it would be politically difficult to amend the current system, but it could be brought more in line with comparable systems overseas like the UK where (a) students pay a greater proportion of the cost of tuition, and (b) they can borrow the full amount from the Government, but (c) repayments begin only when the graduate is earning around NZ\$50,000 and (d) the repayment amount is 9% on everything earned above the minimum.

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<sup>2</sup>Ministry of Education, Education Counts. The report can be accessed at this [link](#).

## **Fee deregulation**

We recommend some fee deregulation in areas where it is more likely students are informed customers and understand market choices. We see two key areas:

- i. Deregulation around numbers of students and tuition fees for the post-graduate qualifications that have particularly strong employment and earnings outcomes. This is mainly taught masters qualifications.
- ii. Charging interest on loans for some postgraduate qualification and/or for adult students who cannot currently access loans.

**Q8: How could the Performance-Based Research Fund (PBRF) best support a continued focus on research excellence, while minimising compliance costs and any other unintended consequences?**

UNZ has already answered this in recent submissions to the UAG (Appendices 1 and 2).

**Q9: How might the Centres of Research Excellence (CoREs) scheme evolve to be responsive to new ways of doing research and allow new centres to emerge while not creating expectations for permanent support of earlier entrants?**

It is unclear what problem this question is trying to solve. Have the current and previous CoREs not responded to new ways of doing research? If this is indeed the case, a new relevant performance indicator could be introduced to the performance measurement framework<sup>3</sup>. However, care must be taken to ensure the CoRE Fund's primary purpose of capability through post-graduate programmes is preserved, and therefore, one key metric of success remains the production of excellent postgraduates undertaking excellent research.

Furthermore, is there truly a risk of creating expectations of permanent support if the funding term is made explicit at each selection round? CoRE applicants know at the outset that re-investment is not guaranteed. Expectations can be further managed through the development of clear exit strategies at the outset that ensure grandfathering support for PhD students and sufficient funding to support the completion of research programmes.

We suggest government creates a new CoRE seed fund (with additional investment, not from the current CoRE funding envelope) for potential new applicants to develop their research proposals prior to entering a CoRE funding round. This would encourage new innovative research ideas to be tested before the government commits to awarding long-term funding.

The CoRE Fund has proved to be an invaluable mechanism for research capability development and is an excellent demonstration of highly effective research-led education. The CoRE Fund, primarily because of the duration of funding for successful applicants, means that research can progress from fundamental science to translation (e.g., into industry, clinical practice, government policy). As a result, the Fund has delivered huge benefit to New Zealand through

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<sup>3</sup> [Performance Measurement Framework – Centres of Research Excellence | Tertiary Education Commission](#)

delivering research outcomes. Therefore, this Fund warrants greater and longer-term investment.

CoREs should continue to be funded (inflation-adjusted) for a minimum of eight years to maximise their impact and deliver maximum benefit for government investment. This does not have to mean that CoRE investment rounds are undertaken only every eight years. Flexible and more frequent funding rounds would ensure the government invests in rapidly emerging fields of research excellence in New Zealand. This could also be done by altering the selection criteria to reduce the weighting on applicants' track record, for instance, in the absence of a new CoRE seed fund (proposed above).

We therefore recommend the government commits to additional CoRE funding that is invested in new CoREs in 2026. This should be additional funding rather than reprioritisation within existing funding envelopes.

Opportunities for CoREs outside the STEM subject areas should be created to ensure a broader range of disciplines are represented. This can be done through any of the following mechanisms:

1. altering the selection criteria, accordingly,
2. stipulating a certain number of new entrants in each CoRE round, or
3. creating entirely separate funding rounds for new entrants.

We have publicly<sup>4</sup> supported the establishment of a Pacific CoRE that focusses on Pacific research and developing Pacific research capability. The contributions of a Pacific CoRE to the SI&T landscape in the region and internationally would be significant.

**Q10: How could the system evolve to allow universities to reduce the overhead rates they charge on research contracts and grants?**

This question implies that university overheads on research can be reduced without significant impact on their ability to deliver research and research capability building at current rates.

Given the lack of other funding mechanisms, the need to charge overheads is unavoidable and the full cost for public good research (including research done by CRIs) should still ultimately be met by the Crown. Furthermore, this question also does not recognise the that primary issue facing NZ's research system is the extremely low level of government investment in research at 0.65% of GDP direct investment. The suggestion that overhead rates can be reduced also implies that overheads are 'profits' for research organisations, which is not the case.

Overheads for university research<sup>5</sup> contribute to the real costs of research, are similar to those in other comparable research systems overseas and much lower than the rates charged by large private consultancies. Unless government provides significantly more funding to support the real costs of research and significantly reduce associated compliance costs, overheads cannot

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<sup>4</sup> <https://www.universitiesnz.ac.nz/latest-news-and-publications/briefing-incoming-minister-science-innovation-and-technology-november>

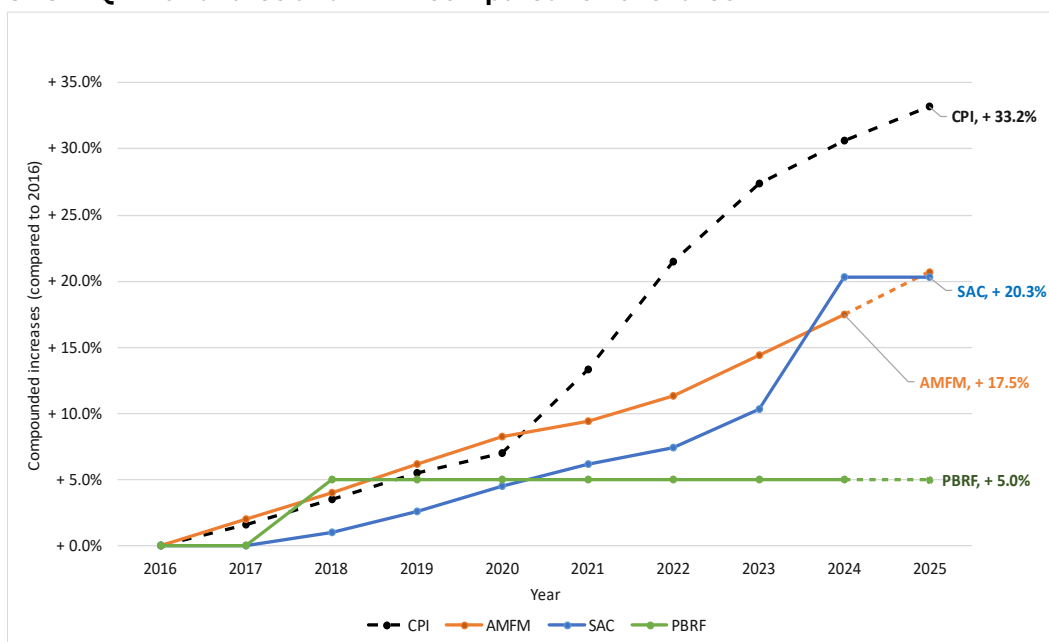
<sup>5</sup> NZ universities overheads are between 111% and 115% on salaries associated with public good research.



simply be reduced. Furthermore, the way in which they are currently calculated is more transparent than a block funding grant would be.

Question 10 also assumes that research ‘costs’ are the same irrespective of the ‘supplier’. The real cost of research in the university sector is masked by the current funding model that requires more than 15% of research to be cross-subsidised by teaching and from other revenue streams. This figure of >15% does not consider any overhead contribution with regards to non-salary cost components (e.g. buildings and facilities, consumables, insurance ...) which means that the true cost of research at the University already is greater than the 'full-cost recovery'. This is compounded by the growing pressure on universities to generate revenue from other sources because government funding lags far behind CPI (Fig 1).

**Figure 1. Compounded CPI vs compounded increases in domestic student fees, SAC/DQ7+ fund rates and PBRF compared to 2016 rates.**



*NOTE: SAC/DQ7+ is the tuition subsidy universities receive on student enrolments. AMFM (Annual Maximum Fee Movement) is the maximum amount by which domestic student fees can be increased. Annual percentage changes are based on general policy announcements and do not take into account additional increases given to courses for Mātauranga Māori and Te Reo Māori which differ on an institution-by-institution basis.*

In order to adjust for this compounding issue, some universities’ overhead recovery has been decreasing steadily by reducing their FTE on grants to decrease overhead. The net result of decreasing overhead recovery is increasing research precarity, not less, as the universities have less ability to support the research infrastructure, including bridging salaries (e.g. for the 80%-funded MBIE fellowships).

Any reduction in overheads will potentially have two undesirable outcomes: research activity will be reduced and/or research costs will need to be "cross-subsidised" from other revenue (e.g., student-levied revenue) which in turn will have further negative consequences such as deterring New Zealanders from engage in postgraduate research.

However, there are ways to increase the productivity of New Zealand's SI&T system. For instance, shared nationally significant research infrastructure which is supported by a dedicated government investment that aligns with a national research infrastructure strategy (as in the UK and Canada). Good examples of where research infrastructure is shared among multiple institutions but accessed by all relevant researchers include the Australian National Nanofabrication Facility and the Microscopy Australia consortium.

Government should also consider ways to drive public-private partnerships and incentivise private investment in research and ultimately sharing of research overheads. Growing industry engagement and investment in innovation is key to lifting our percentage GDP spend on R&D and will also lead to better translation of research into commercial products in many cases. We have suggested multiple ways of growing industry engagement and investment in innovation in previous submissions to government<sup>6,7</sup>.

Alternatively, a new model could be adopted whereby Government provides co-funding for research done with and for domestic end users. Under this model, end users, for instance charities (e.g., Cancer Society, Heart Foundation, CureKids, Neurological Foundation) that fund important health and medical research for public good, could pay direct costs and Government covers overhead costs or they could receive a tax credit. This would encourage greater investment in research from non-government agencies, result in a decrease in the overhead calculation as more funded research is attracting overhead, allowing a decreased overhead rate without reducing overall funding, and, therefore, increase societal benefit to New Zealand from research.

Irrespective of the solution, NZ needs to attract greater private investment in R&D. The current R&D tax incentive has not delivered the intended results, perhaps because the majority of New Zealand's private sector is made up of SMEs (fewer than 10 employees). Therefore, we recommend incentivising SMEs to participate in R&D in addition to creating a more conducive environment for larger enterprises to thrive and ultimately share some of the overhead costs.

### **Private consultancies**

Decades of experience working with end users tells us that the issues are generally not that universities are charging too much but that they are one or more of the following:

- End users are doing apples or oranges comparisons – looking at the rates charged by contractors with substantially less experience, less capability, and offering less value.
- End users who are looking for free consulting or project services from universities because they do not want to pay the rates charged by professional consultancies.
- A mismatch of expectations with end users really wanting a quick cheap answer to a question, and universities really wanting to carry out credible and authoritative research.

We do think that there is a real problem that many end users do not know what universities can do for them to assist understanding or solving problems through research or when to approach a university rather than going to a consultancy to solve a problem or need.

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<sup>6</sup> <https://www.universitiesnz.ac.nz/sites/default/files/uni-nz/documents/UNZ%20Submission%20SSR%20Phase%20One.pdf>

<sup>7</sup> [UNZ submission on Te Ara Paerangi - Future Pathways Green Paper.pdf \(universitiesnz.ac.nz\)](#)

**Q11: What changes would provide stronger incentives for universities’ “third mission” of contributing to social, environmental, cultural and economic outcomes?**

Universities’ core distinct mission is research-led teaching to enhance a knowledge-based society across the full range of disciplines and subject areas<sup>8</sup>. It is through our research-led taught graduates and our research that we have impact on society, economy, and the environment. Across all disciplines there are opportunities with increased investment and suitable policy settings to increase universities’ contribution to economic development and transformation through research translation, entrepreneurship, and innovation. This concept has been formally recognised in several other jurisdictions<sup>9</sup>. The German Fraunhofer model provides an excellent template for effective translational research, aspects of which could be emulated in New Zealand<sup>10</sup>.

Universities are also collectively pursuing open research which will ensure research outputs and results of publicly funded research can be easily accessed by government and the public<sup>11</sup>. Open research is also an important contributor to countering the rise of misinformation and disinformation. Open research does come at a cost, however, and we suggest government assists the RS&I system to embrace open research.

Universities’ contribution to these outcomes could also be enhanced by a dedicated fund to support the research of postgraduate students and postdoctoral fellows. In addition, the reintroduction of student allowances for postgraduate students would encourage more New Zealanders to pursue postgraduate studies.

We have previously suggested (Appendix 1) to the UAG that returns from public investment in research can be maximised if settings and incentives are better aligned with what the system needs in the short, medium, and long-term. Government agencies, local government, iwi, industry bodies, etc should be involved in identifying research needs and more doctoral and postdoctoral research should be done with and for end users. This will produce research and a workforce that is better connected to end users and better able to contribute to economic, social, cultural, and environmental outcomes.

**Question 12: What is working well, and what could be improved, about current settings for managing capital investment and divestment by universities?**

The universities all have different operating contexts<sup>12</sup> and are at different stages in the management of capital. The built infrastructure for each university covers a wide range of conditions and needs.

In general, we think it best that well managed and governed universities are able to make as many capital decisions as possible.

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<sup>8</sup> [UNZ's Science, Innovation and Technology BIM Nov 2023](#)

<sup>9</sup> Breznitz, S. M. (2014) *The Fountain of Knowledge: The Role of Universities in Economic Development* 1st ed. Stanford University Press. <https://doi.org/10.2307/j.ctvqsdqxm>.

<sup>10</sup> <https://www.fraunhofer.de/en.html>

<sup>11</sup> <https://www.universitiesnz.ac.nz/sites/default/files/uni-nz/documents/Open%20Access%20Statement.pdf>

<sup>12</sup> For example, the University of Waikato does not own the land it sits on, Auckland University of Technology was established on a different capital basis to the other universities, Victoria University of Wellington has particular seismic risks to mitigate, the University of Otago has an unusually high number of heritage buildings, universities in city centres tend to have to grow upwards, etc.



## **Appendix 1. UNZ's recent briefing note provided to the UAG: University research - metrics for demonstrating value and driving further investment.**

The UAG posed the question of the Vice-Chancellors: if PBRF Quality Evaluation is done away with, what other metrics might be more useful for (a) demonstrating value, and (b) encouraging further Government investment?

To answer this, the following needs to be better understood:

1. The university business model is built on a virtuous cycle of quality teaching and research that attracts staff and students that provide the funding to support even better teaching and research.
2. The things that support that virtuous cycle in universities includes many things that governments value and want, but more value could be realised with different incentives and investment settings.
3. PBRF sits at the very base of the research system. As a devolved fund, it enables universities to decide where best to invest to produce the best outcomes. It is a key part of creating the country's research workforce and developing it. It is a key source of fundamental research. It allows universities to maintain a vast array of expertise that can be accessed as and when needed by end-users.
4. To gain the greatest benefit from PBRF, Government needs to deliberately support and incentivise activity that sits in the sweet spot of what universities value and what will translate the value of research into benefit for the country.

This briefing note explains this in more detail and suggest areas where additional value could be unlocked.

### **Introduction and Context**

Since 2019 there have been at least two attempts to review the science and research system – MBIE's 2019 consultation document on 'New Zealand's Research, Science, and Innovation Strategy' and the 2021 'Te Ara Paerangi – Future Pathways Green Paper'. Both identified a number of common problems and challenges. Key among these are:

1. The RS&I system has a lot of priorities and players. The current system is complex to navigate and there is duplication of effort. We produce a lot of research but are only a little above the OECD average for highly cited research papers.
2. Competition for funding is a good way of forcing the RS&I system to be innovative and responsive to funder priorities, but it inevitably also fosters a degree of unproductive competition and may impede collaboration.
3. The system has a lot of inertia built into it. It takes decades to produce specialist researchers – starting from what they focus on at high school through to when they are able to successfully secure research funding and run impactful research projects. Research entities (Crown Research Institutes, universities, National Science Challenges, Centres of Research Excellence, etc) have a similar inertia. Once capability is in place, it can be hard to redirect it.
4. Our researchers are well connected with other researchers internationally but could be better connected with some domestic users of research.
5. The level of business investment into research carried out by universities is low compared with the OECD.
6. Our country has a problem with low productivity.

Universities can play a role directly or indirectly in all of these but within some fundamental constraints. Key among these are:

1. Universities cannot tell students what to study. However, universities can (a) provide advice and information to help students take decisions that make it more likely they position themselves for successful lives and careers and (b) provide some financial support for students via targeted scholarships and/or stipends.
2. Universities are highly devolved internally. They cannot tell academic staff what to research. All universities (and funders) can do is create incentives that align the research (and teaching) interests of academics with wider priorities and needs.
3. Universities must be financially sustainable. University leaders are always focussed on ensuring that they are not entering into financial commitments that can become a downstream liability if funder priorities change.
4. The academic community is not homogenous but is overwhelmingly populated by people who are there because of the potential to make public-good contributions. People generally do not choose university careers to get rich, or to solve problems that don't interest them.
5. Universities take a broad view of research impact and quality whether applied or pure, mission-led, or investigator-led. Universities generally consider research to be valuable and impactful when it satisfies one or more of the following:
  - a. The researcher's subject area is generally interesting to students and the academic's research is fully funded through student enrolments (including postgraduate research qualifications).
  - b. The research is of interest to other researchers and is cited and built upon. It contributes to the university's reputation and rankings. (*This heavily incentivises international collaborations and publication in international journals*).
  - c. It has a public good impact – driving better policy, better interventions, better understanding, and better uptake.
  - d. Someone is funding the research – implying it has potential value.

New Zealand universities all have a variety of mechanisms for understanding the contribution of their staff across these areas. Not all staff are expected to be contributing fully at all times, but those that are not are expected to be on track for doing so at some appropriate point in future.

In the main, universities are funded through tuition fees and funding from taxpayers. 53% of income (\$2.63bn) is student related income and 28% (\$1.4bn) is research related income – with 91% of that 30% (\$1.27bn) coming through some taxpayer funded channel.

Our universities are autonomous Crown entities expected to operate on a public-good basis – contributing widely and freely to the widest range of societal, environmental, and economic challenges. As much as possible, universities should be connected with the communities they serve, and their knowledge and capability should not be overly locked away behind paywalls or patents.

### **The Performance-Based Research Fund**

The PBRF was created based on the recommendations of a 2002 working group that noted that the “*absence of incentives for performance places New Zealand at a disadvantage, since many of the nations we traditionally compare and benchmark ourselves against have – or are*

*increasingly moving towards – performance-based funding and regulatory systems for tertiary research.”<sup>13</sup>*

PBRF funding originally came from funding provided to universities as research-degree ‘top ups’. PBRF remains essentially a university research fund with 96% of its funding going to universities.

The main challenge with the PBRF in the ensuing years is that what has been measured and rewarded in each Quality Evaluation round only peripherally reflects what PBRF funding is actually used for.

PBRF funding is provided as devolved bulk funding allowing universities to decide where and how the funding will deliver the greatest value. In the main, it is used by universities for four things:

1. **Support for postgraduate Masters and PhD research qualifications** – particularly through doctoral scholarships and stipends.
2. **Support for early career researchers** - supporting research that will successfully develop them into mid-career researchers able to successfully secure external research funding. Provision of postdoctoral fellowships.
3. [Linked to (2) above] **Support for fundamental research and investigator-led research**- 53% of basic and fundamental research is done by universities.
4. **General research infrastructure** – library resources, ICT infrastructure, laboratories, workshops, etc, that underpin the wide range of knowledge transfer, teaching, and research.

PBRF is just a contributor to these things and universities do not directly associate PBRF funding with the amount of funding directed to these activities. All of them are cross-subsidised to some extent from other university income – reflecting the fact that PBRF funding comprises just 6.7% of overall university sector funding. Each university also prioritises these things differently and may use funds for additional purposes – including investing in research that the university sees as strategically important.

We believe that the return on investment in having PBRF funding directed to these four areas is high – probably as high or higher than the returns from other Crown research investment given the substantial indirect and spillover benefits to every other part of the research and innovation system.

However, the return from investment is hard to quantify given the majority of benefits are realised outside of the sector over long timeframes with massive variation in what is realised and where and how.

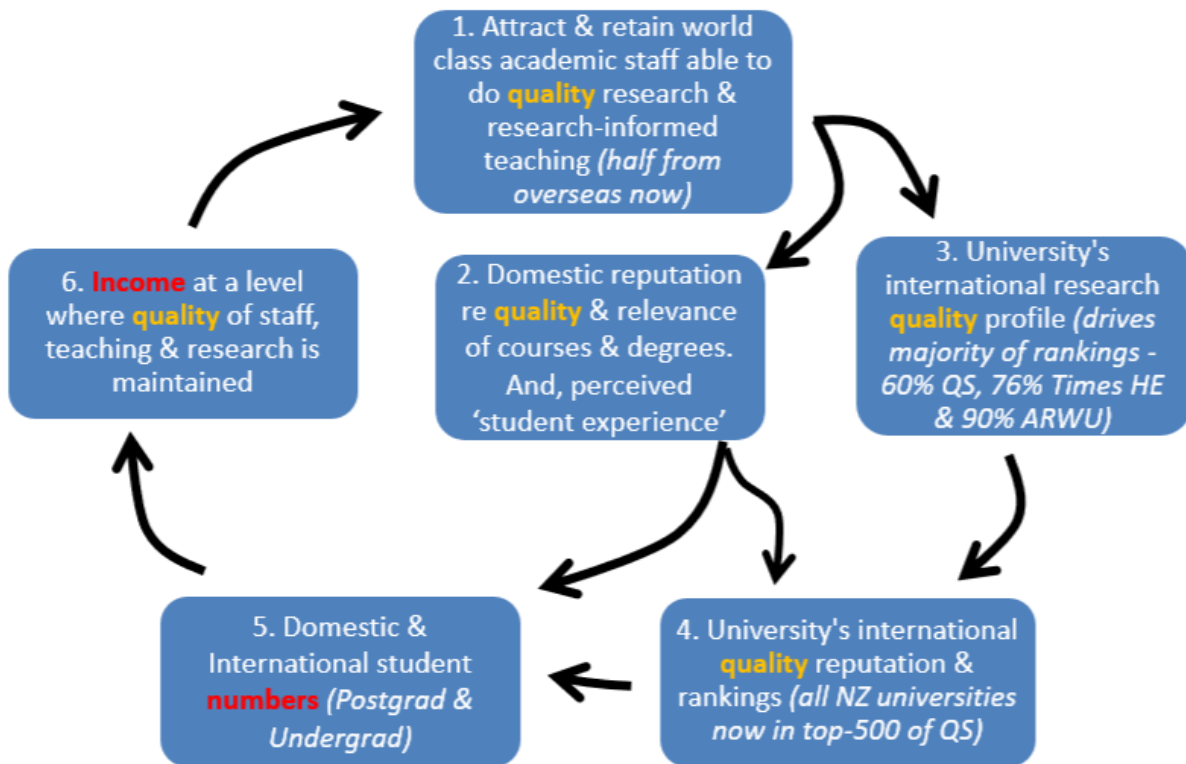
### **The Universities Business Model**

At a greatly simplified level, the university sector business model can be envisaged as a virtuous cycle built on a mutually self-reinforcing interaction between quality and income. This virtuous cycle underpins the ability of universities to fulfil their broader missions across areas such as educating future generations and growing knowledge and understanding .

This is shown in the diagram below.

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<sup>13</sup> Recommendation 4. ‘Investing in Excellence’ The Report of the Performance-Based Research Fund Working Group, Ministry of Education and Transition Tertiary Education Commission, December 2002. <https://www.beehive.govt.nz/sites/default/files/Investing%20in%20Excellence.pdf>



Without government, universities would broadly configure themselves to generate the best possible outcomes under this model. At a very simplified level:

- They would actively support quality teaching and research and do everything necessary to ensure qualifications are understood and respected by employers.
- They would continue to support research that is of high quality and that is widely cited. But, particularly for early career researchers, this would naturally tend to be research that is cited by other academics nationally and internationally.
- They would continue to support their early career academics to develop to the point where they are able to successfully compete for external research funding. But this would more often than not be by encouraging the academic to do more investigator-led research on topics of academic interest for publication in academic journals.
- They would continue to encourage and support students through postgraduate research qualifications, but with research topics relevant to the academic supervisor's own research interests.

Overall, universities are heavily incentivised towards international connections, collaborations and citations – and this is not a bad thing in itself. But there are other things that the model is currently less effective at supporting – even though there is often genuine interest and willingness from both Government and universities. These include:

1. Supporting more people into and through postgraduate studies. Growing the proportion of the workforce with the research skills to be able to contribute to innovation and productivity. Although PBRF already provides funding for research degree completions, broader funding settings don't incentivise and support students themselves to pursue these qualifications.
2. A research workforce that is more deliberately developed to better align with the long-term research needs of the country.
3. Doctoral and post-doctoral research that addresses real world domestic problems and that grows a research workforce (whether in academia or outside) can continue to work on real world problems. Doctoral and post-doctoral research that is done with and for end users.



4. Supporting a greater number of Māori and Pacific successfully into the research workforce.  
Supporting more women into more senior academic positions.
5. Knowledge transfer to end users – particularly from the fundamental and investigator-led research being done by early career researchers.

PBRF cannot and should not be used to address these challenges by itself, but more value could be unlocked if it was looked at in combination with wider Government teaching and research policy and investment settings.

The remainder of this paper explores this in the next four sections:

1. The return from investing in PBRF – the case for investment.
2. Aligning investment to short, middle, and long-term strategic objectives.
3. Using quality evaluation to incentivise universities (and to support the case for further Government investment).
4. Funding levels and settings that will support universities to realise the strategic objectives.

### The return from investing in PBRF (and universities) – The case for investment.

Given the relatively small dollar value of PBRF and the fact it is a devolved fund that universities apply and cross subsidise in different ways, it is not possible to determine the return on investment from different settings around PBRF and other university research activity. But we can infer returns from the limited information that is currently available and from overseas experience

The additional income that people earn on average over their working lives where they have some sort of post-school qualification is shown below based on data from the 2018 Census.

Earnings over working life ABOVE that of someone with no post-school qualification (people in full time study only)	Lvl 4 (Certificates)	Lvl 5 (Diplomas)	Lvl 7 (Bachelors)	Lvl 8 (Honours)	Lvl 9 (Masters)	Lvl 10 (PhD)
Sciences	\$0.6m	\$0.8m	\$1.1m	\$1.4m	\$1.3m	\$1.6m
ICT	\$0.5m	\$1.0m	\$1.6m	\$2.0m	\$1.8m	\$2.0m
Engineering	\$1.2m	\$1.5m	\$1.6m	\$2.3m	\$1.9m	\$2.1m
Architecture & Building	\$1.1m	\$1.3m	\$1.7m	\$1.9m	\$1.7m	\$1.3m
Agriculture & Forestry	\$0.6m	\$0.8m	\$1.1m	\$1.2m	\$1.1m	\$1.5m
Nursing & Rehabilitation Therapies	\$0.2m	\$0.7m	\$1.2m	\$1.5m	\$1.7m	\$1.7m
Medicine (incl Doctors)	\$0.4m	\$0.9m	\$3.5m	\$3.9m	\$3.7m	\$4.0m
Dental	-\$0.3m	\$0.3m	\$0.6m	\$0.9m	\$1.1m	\$1.6m
Veterinary	\$0.0m	\$0.6m	\$2.1m	\$1.9m	\$3.1m	\$3.3m
Other Health (radiography, optical, pharmacy, etc)	-\$0.4m	-\$0.1m	\$1.8m	\$2.1m	\$1.9m	\$2.2m
Alternative Health	\$0.0m	\$0.4m	\$0.7m	\$1.0m	\$1.1m	\$1.7m
Education	\$0.1m	\$0.3m	\$0.5m	\$0.8m	\$0.8m	\$1.2m
Business & Accounting	\$0.8m	\$1.1m	\$1.8m	\$1.9m	\$1.9m	\$2.0m
Tourism & Office Mgmt	\$0.3m	\$0.4m	\$0.2m	\$0.6m	\$0.8m	
Arts	-\$0.1m	\$0.2m	\$0.7m	\$1.0m	\$1.0m	\$1.5m
Political Science		\$1.2m	\$1.4m	\$2.0m	\$2.0m	\$1.9m
Law	\$1.1m	\$1.3m	\$2.6m	\$2.7m	\$2.8m	\$2.1m
Economics	\$0.3m	\$0.4m	\$1.6m	\$2.3m	\$1.8m	\$2.4m
Creative & Performing Arts	\$0.3m	\$0.5m	\$0.6m	\$0.7m	\$0.6m	\$0.7m
Hospitality & Food	\$0.1m	\$0.1m	\$0.2m	\$0.4m	\$1.2m	
<b>Averages</b>	<b>\$0.8m</b>	<b>\$0.9m</b>	<b>\$1.3m</b>	<b>\$1.6m</b>	<b>\$1.6m</b>	<b>\$2.0m</b>

Someone with a masters qualification will earn \$1.6m more over their working lives and that rises to \$2.0m for someone with a doctorate. These qualifications also open up career paths closed to those without an advanced research qualification.

Universities use PBRF to provide financial support to around 26% of doctoral students during their doctoral studies. The support provides these 26% of students with typically around \$120,000 of fees and contribution to living expenses over a 3 - 3.5 year period. This is a net annual spend across the eight universities \$68m – or 22% of PBRF funding.

A graduate that gains a doctorate in their 20s and earns the additional \$2.0m over their working life will pay the Crown around \$630,000 in additional income tax. They also contribute back via GST and their contribution to their employer’s company taxes.

It is impossible to quantify exactly what benefit Government has received from the \$68m of PBRF funding that is being invested annually to producing a research-degree qualified workforce, but given the numbers above it must be in the order of 5-10 times the initial investment in training them.

Entities that employ researchers, commission research, or that use researcher-generated knowledge generate a range of economic, social, and cultural benefits. They solve problems and realise opportunities. They also pay taxes – from income that should be larger because of research and researchers. Some of that research has been commissioned directly. Other research was accessed to the entity.

At present, only 7% of New Zealand’s workforce has a postgraduate (research) qualification, compared with an OECD average of 15%. The table below shows the percentage of the population in New Zealand, Australia, Canada, the UK, and US enrolled in masters or doctoral studies in 2013 and in 2020. New Zealand is experiencing real growth, but we still have just 0.274% of our population studying at these levels compared with an average that is nearly double that (0.508%).

<b>% of population in PhD or masters studies</b>	<b>2013</b>	<b>2020</b>	<b>Growth 2013 to 2020</b>
Australia	0.501%	0.777%	55.0%
Canada	0.433%	0.471%	8.8%
<b>New Zealand</b>	<b>0.190%</b>	<b>0.274%</b>	<b>44.5%</b>
United Kingdom	0.392%	0.480%	22.5%
United States	0.548%	0.538%	-1.8%

We don’t really know why the proportion of the population gaining a postgraduate qualification is so much lower than the rest of the OECD, but we believe its closely linked to the fact that we don’t provide allowances to help postgraduate students with living costs while they pursue their studies.

There are some insights in the Integrated Data Infrastructure (IDI) and the Census. Focusing on people who were studying for a doctorate in 2018 (N=4920):

- 40% were aged 40 or over.
- 71% were working while studying – a mixture of full-time and part-time.
- 63% reported an income below \$50,000
- 17% were employed to teach or tutor at the place they were studying.

In general, we believe that employment outcomes are better for graduates whose research was done with or for end-users and we know that these graduates contribute more to employers through actionable insights and research.

Together these grow the return on investment for (a) students investing their time and money on postgraduate studies, and (b) government supporting those students into qualifications that will lead to much larger returns through income tax, GST, company tax, and non-financial outcomes such as better policy, and broader social and cultural outcomes.

We also think that there are lessons internationally that can inform an assessment of the likely value of university research to New Zealand – including that supported or enabled by PBRF.

For example, the National University of Singapore (NUS) research centres drive advancements in technology, healthcare, and finance, contributing to Singapore's knowledge-based economy. Singapore's economy performed well despite recent global challenges. Irish universities, including Trinity College Dublin and University College Dublin, have been instrumental in Ireland's economic success. They collaborate with multinational corporations, supporting research and development initiatives. Ireland's GDP per capita ranks 7th globally, reflecting its strong economic performance. Universities in Denmark, such as the University of Copenhagen and Aarhus University, engage in interdisciplinary projects, addressing societal challenges like sustainability, health, and digitalization. Like Ireland, Denmark has maintained steady growth over the past years. Its GDP per capita ranks 10th globally, highlighting its economic stability.

These examples show how universities foster innovation, produce skilled graduates, and collaborate with industries, all contributing to their country's economic growth. By way of comparison, New Zealand's GDP per capita was 25th in the world in 2023. International comparisons show the value of investment in excellent university research. PBRF is one mechanism for enhancing the type of research excellence that is shown to provide economic gains internationally.

### **Aligning investment settings and incentives with short, middle, and long-term needs.**

We suggest returns from PBRF and other associated Government investment can be maximised if settings and incentives are better aligned with what the system needs in the short-term (say over the next 5 years), middle-term (say 5-15 years), and long-term (15-30+ years). Settings and incentives should be broadly aligned as follows:

#### **1. Long-term (15-30+ years).**

- 1.1. Research priorities should identify the things that we will still be addressing in thirty years' time. These are likely to include areas such as (a) climate adaptation, (b) aging and health, (c) government policy making, etc.
- 1.2. Permanent research infrastructure (capital assets and standalone research institutes) should only exist where they align with a long-term priority.
- 1.3. Government should be incentivising doctoral research that deliberately creates a research workforce that will be able to support these long-term needs over their (typically) 30+ year careers.

#### **2. Middle-term (5-15 years)**

- 2.1. Government policy ministries and industry bodies should be publishing their middle-term research problems – the things that they have to work out how to solve in the next 5-15 years but don't currently have solutions for. (*EXAMPLE: An existing model for this*

*is the United Kingdom's 'Areas of Research Interest'<sup>14</sup> which sees departments publish details of the main research questions facing them. This is something that could be overseen by the office of the Chief Scientist and supported by the network of science advisors.)*

- 2.2. Doctoral scholarships and post-doctoral fellowships should incentivise research with and for policy ministries, industry bodies, and large employers to develop solutions for middle-term problems.

### **3. Short-term (0-5 years)**

- 3.1. Government policy ministries, industry bodies, and large employers should be publishing their current information and knowledge gaps.
- 3.2. Government should be incentivising knowledge transfer from universities to domestic end users in line with current information and knowledge gaps and fostering connections between the university academic workforce and the end users.

### **Evaluation and incentives (refining Quality Evaluation)**

As a devolved fund, PBRF has given universities considerable freedom to decide where and how to invest it to generate the greatest impact within the context of the particular university.

The process for allocating PBRF has been a mix of (a) easy and inexpensive to measure metrics (*research degree completions, and the value of external research income*) and (b) the much more onerous and expensive Quality Evaluation (QE) round carried out every six years.

Universities support the decision to not proceed with a 2026 QE round and agree that the QE process is no longer delivering sufficient value to warrant resurrecting the process at some point in the future.

A weakness of QE process was that spending a lot of time and effort categorising academic staff into A, B, C, and C (NE) never really mattered to taxpayers or ministers. The number of people in a particular quality category is not an outcome or impact measure. It is hard to make a case for further investment in PBRF when the outcome is mainly an input metric – growing the proportion of academics doing high quality research.

We believe that there should be some sort of evaluation of quality and that it should remain broadly focussed on ensuring excellence in research. But we also think it should be focussed more on the sweet spot of things that taxpayers, governments, and universities themselves care about:

1. Creating incentives for universities to generate as much value as possible domestically around short-term, middle-term, and long-term objectives and needs.
2. Driving impact and return on investment.
3. Supporting the university business model.
4. Supporting the case for further investment.

We also believe that any mechanism for evaluating quality and allocating funds should:

- a. Continue working to a six-year cycle.
- b. Be simple and inexpensive in both time and money for both universities and taxpayers.
- c. Incentivise universities to be forward looking – focussed on current and emerging needs for knowledge, ideas, and skills.

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<sup>14</sup> <https://www.gov.uk/government/collections/areas-of-research-interest>

We think that the focus must remain on excellence in research. We need universities to continue doing the sorts of basic fundamental research for which there may be no current application but that may lead to something more transformative in future. We also need universities connecting and collaborating internationally.

However, there are opportunities for universities to measure and communicate more clearly the value added from some of the things that demonstrate a return on investment, such as:

- 1.1. Proportion of the university research workforce (academic and non-academic) that is aligned with long-term research and policy priorities.
- 1.2. Research collaborations across disciplines.
- 1.3. Research collaborations across domestic institutions.
- 1.4. Leadership and mentoring of more junior researchers.
- 1.5. Growth in research-degree qualified graduates – particularly in areas aligned with long-term research and policy priorities.
- 1.6. Research degrees done with and for end-users.
- 1.7. Where government policy agencies and industry bodies publish middle or long-term research priorities, the proportion that are being advanced or have been adequately addressed through university research.
- 1.8. Evidence of progress towards an equitable and representative research workforce.

We also think that efforts should be made to understand and quantify the extent to which successful knowledge transfer is taking place between universities, government, civil society, and industry. Although much of this is informal and unacknowledged, we expect that developments in AI will make it easier to survey and assess this in future.

We also believe that international connections, collaboration, and knowledge exchange is a key source of value for the country. We recommend continuing to assess this and to also find ways of assessing quality and impact. Much of this can be done through existing databases (Scopus, Web of Science, etc) and, again, more will be possible in future through use of AI.

We are monitoring developments in this area in the UK and Australia<sup>15</sup>. Although we think both systems are heading in a better direction by taking a more holistic view of research quality, both will still require substantial investment of time and effort.

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<sup>15</sup> Research quality in the UK is assessed through the Research Excellence Framework (REF) evaluations. Subject experts evaluate research submitted by universities assessing research outputs, impact case studies, and the research environment. Contributions to Knowledge and Understanding (CKU) (50% - proportion proposed for the 2029 REF across 34 units of assessment, i.e. disciplines) are assessed according to rigour, significance, and originality of research publications. Engagement and Impact (E and I) (25%) is based on reach and significance beyond academia (e.g., societal, economic, or cultural impact). The People, Culture and Environment (25%) uses criteria related to research culture, sustainability, and facilities with these still under consideration. The REF considers a holistic view of research quality, moving beyond narrow metrics and ensuring those that adhere to the principles of responsible research assessment. Expert reports advised against the use of AI/ML to streamline assessment. Therefore, the REF will continue to use expert review with some use of metric indicators. Sub-panels will consider each Unit of Assessment (i.e. discipline). The Excellence in Research for Australia (ERA) use somewhat similar criteria to the UK REF. The ERA also assesses research performance through expert peer review panels. However, the ERA is more explicit about the use of bibliometrics (such as publication counts and citation impact) to evaluate research quality. Panels use a Citation Index related to individual research outputs based on their citation impact and citations are compared to world and Australian benchmarks. The ERA assesses Relative Impact to determine how research outputs perform compared to global and local standards. Like the REF, Research Environment is assessed by considering facilities, and collaboration opportunities. Both the UK REF and the

For New Zealand, an approach that makes use of readily available metrics to assess overall university research quality at the institutional level rather than at the individual level makes good economic sense and would be in line with the UK and Australian systems. UNZ could look to the systems being developed in the UK and Australia and draw from the best of both.

Under all scenarios we do not support returning to any evaluation mechanism that requires expensive time-consuming production and assessment of portfolios.

### **Funding settings around PBRF (and other associated Crown investment streams) that will support universities to realise the strategic objectives.**

As previously stated, PBRF is mainly used to support (a) postgraduate research qualifications, (b) support for early career researchers, (c) support for early career research – including much of the fundamental research done within universities, and (d) general research infrastructure.

But PBRF does not exist in a vacuum. Universities provide significant additional financial support for research activities beyond PBRF. Certain research outcomes that PBRF supports—such as research degree completions—also depend on funding settings in DQ7+ (SAC) and StudyLink.

Although PBRF is provided as devolved bulk-funding, we believe that universities can be assisted and incentivised to direct it towards areas that unlock the greatest value through things like (a) dedicated supplementary funding targeted to short, middle, and long-term priorities, and (b) ensuring that policies and funding levels associated with other funding streams are aligned with PBRF objectives.

Most of the issues and opportunities are directly linked to funding.

We suggest the following:

#### **1. Doctoral scholarships** (*Increase PBRF to support more doctoral research*)

PBRF funding only allows universities to provide financial support to 26% of students undertaking doctoral studies. We suggest that the payback to the Crown is substantial enough that PBRF funding be increased to allow support for a much larger percentage of doctoral students – particularly those doing their PhD at the start of their working lives.

#### **2. Applied doctorates** (*Ring-fenced funding on top of PBRF to grow the impact of PBRF*)

The decision in Budget 2023 to establish Government funded Applied Doctorates was welcomed by the sector. We see these applied doctorates as one of the most important elements in solving real world middle to long term problems and developing a research workforce that is aligned to long term research and policy priorities.

These Applied Doctorates need deliberate strategy and additional ring-fenced funding to ensure they will unlock the greatest value possible. We believe they need the following key elements:

- 2.1. Doctoral research is overseen by both a university and an end user that is able to take a middle to long term strategic view of research needs – such as a sector body, a large employer, a Government policy agency, etc.

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Australian ERA are moving away from individual researcher assessment (the EP of previous PBRF) to the assessment of institutions and disciplines (units of analysis) within those disciplines for the REF and for the ERA assessment of institutions.

- 2.2. The PhD candidate, university, and end user would agree a real-world middle-term problem that the end user needs addressed and that the university agrees will be PhD level research.
- 2.3. Doctoral candidates without relevant experience in the research or policy area would have financial and non-financial support from Government and the end user for gaining real world experience ahead of defining their research problem.
- 2.4. Funding would be sufficient to allow for any or all of the following where agreed criteria are met: (a) salary/wages for the student to spend time working in the industry, (b) costs associated with investigating and researching the problem, and/or (c) costs for the university and industry in overseeing and administering the research.

**3. Mechanisms to better connect academic experts with policy makers on current and short term research and policy problems** (*Supplementary funding to get more value from PBRF*)

There are different ways this might work, but one successful model is to be found in Ireland. The Irish Universities Association (IUA) runs a successful ‘Evidence for Policy’ initiative. IUA takes a theme (like substance abuse) and brings together all the main policy people from Government and the key academics. Generally, this sees around thirty people at each session broken into groups of about 10 each to facilitate conversations. Policy makers report that having contacts and access to experts and to put questions is hugely helpful. Academics enjoy it as well and report that is an opportunity to showcase their work and ideas and to potentially make a difference.

**4. Settings that encourage sharing of research infrastructure** (*Make PBRF go further*)

Individual universities have a wide range of research infrastructure and arrangements that allow for non-university researchers to access it for a fee when it is not otherwise needed. These relatively ad hoc arrangements only happen after a university has made an internal case for investment in the infrastructure. This often means that spare capacity is often limited (or not built into the investment decision) and opportunities for joint-investment and shared access are often missed.

A formal pan-university and Crown research sector body for identifying needs and opportunities for investing in research infrastructure and encouraging a consortia approach would be sensible. The role of Government could be to fund business case development where potential investment aligns with wider science investment priorities.

**5. Grow PBRF overall** (*Prevent PBRF delivering less*)

PBRF has not increased since 2018 despite inflation of nearly 24%. Universities have increased the value of doctoral scholarships and post-doctoral fellowships but have had to reduce overall numbers. Funding available to support early career research and investment in basic research infrastructure has been similarly cut in real terms.

With the exception of the Quality Evaluation component, PBRF is an administratively efficient way of generating substantial benefits for the wider research system and society generally.

PBRF funding more generally sets a limit on the amount of research that universities can support among the early career academic workforce. In addition to generating useful knowledge, this early career research output helps grow the academic’s research profile – accelerating the time before they can successfully secure research funding externally and start up the promotion ladder. For the early career workforce, this research funding substantially improves productivity, effectiveness, satisfaction, and retention.

One university reports that it takes an average of 22 years for those that come in as junior lecturers to progress to the rank of full professor. The timeframe is very much linked to the ability of the academic to gain the teaching and research profile necessary to get the funding and collaborations and networks that allow them to be effective in knowledge transfer and in contributing to community understanding.

The quantum of all research funding has a similar effect on the ability of universities to recruit academic staff from overseas. Around half the academic workforce was recruited from overseas (including attracting New Zealanders back home). The salary that New Zealand universities can pay is always lower than the salaries they can earn in places like the UK, US, Canada, and Australia. In place of salary, our universities recruit on the basis of (a) lifestyle, and (b) the ability to do interesting research. However, the ability to do this interesting research depends on access to funding.

In addition, we think that there are other areas outside of PBRF where different settings would unlock significantly more value through PBRF and universities more generally.

**6. Postgraduate living allowances** (*DQ7+ & StudyLink to grow postgraduate qualification participation and completions*)

In 2013 eligibility for student allowances was removed for students studying postgraduate qualifications above Level 8 (Honours). Prior to 2013 around 18% of postgraduate students received an allowance. This relatively low percentage did not reflect demand but rather the fact that most students were limited to a total of five years of allowances across all tertiary studies.

We think that more students would want to pursue postgraduate studies if they were able to access financial support to assist with living expenses while studying. We recommend reinstating and significantly expanding access to postgraduate allowances – particularly for students doing their doctoral studies in their 20s (with long careers and tax-paying years ahead of them).

**7. Reduce early-career researcher precarity** (*Consider a Strategic Science Investment Fund for the university sector*)

Universities can only employ early career researchers on open tenure contracts when they have the funding to do so.

Most non-PBRF research funding is provided on a project by project basis with large projects broken into funding tranches. Universities are only able to employ much of their early career workforce on fixed term contracts that align with funding tranches, or event-based contracts that conclude if funding is not renewed. This creates enormous insecurity for the early career academic workforce. A lot of these early career academics live for many years on fixed term contracts.

The Crown Research Institutes had the same issue and Government resolved it in 2017 by moving \$193m of annual funding into the Strategic Science Investment Fund – providing a mechanism for Government to support the development and maintenance of science capability in areas that are long term research priorities.

There would be benefit in doing something similar for the university sector. Where early career researchers are working in areas that align with long-term research priorities, Crown funding should be provided in ways that allow universities to employ and develop their workforce on an open-tenure basis. They will still move around multiple projects, but they will have security of tenure.



#### **8. Most or all research brought out from behind paywalls**

At present just 44% of New Zealand university research is available via an open-access channel, compared with the UK at 67%. As publicly funded institutions most or all publicly funded research should be publicly available. Aim for 70-80% of research to be in open access in the next 5-10 years to improve the ability for potential end users to find and utilise this knowledge.

## **Appendix 2. UNZ's recent briefing note provided to the UAG: What are the key issues and potential solutions regarding the academic workforce?**

New Zealand universities are autonomous institutions. Each have their own policies and industrial arrangements for the employment, promotion, and performance management of their academic workforce. They all generally cover the same sorts of things, but differ substantially in the detail and how they operate.

As autonomous independent institutions, that is appropriate.

However, there are investment and policy settings that are controlled by Government that directly impact the academic workforce and its ability to compete effectively with other countries to recruit and retain the best academic staff.

**1. Funding.** First and foremost among these is the overall quantum of funding. Nearly 70% of university funding either comes from Government or is controlled by Government.

Between Quarter 1 of 2018 and Quarter 2 of 2024 inflation was 25.8%. By contrast:

- DQ7+ (SAC) funding per student rose 19.1% – a shortfall of 6.7%.
- PBRF and other Crown research funding did not increase at all.
- The amount spent by universities on personnel increased by 17.1% – a real drop in salaries of 8.7%.

This fall in real funding is further complicated by the fact that most funding comes through volume-based student funding (DQ7+/SAC) – creating a different set of distortions and risks for the wider academic workforce. The number of staff is driven by numbers of students making the research needs of the country a hostage to EFTS based funding.

Universities are struggling to remain competitive in our ability to recruit and retain good academic staff.

The academic job market is global and there are now too many barriers to attracting and retaining academic talent. Although lifestyle is a consideration for many academics in choosing New Zealand, universities are now reporting that many of the best doctoral graduates are choosing to go overseas. We are facing the risk of a lost generation of academics.

There is substantial insecurity for people wanting to enter the academic workforce. Many are initially employed on research-focused Crown-funded event-based contracts that are only renewed if project funding is renewed or there is funding for new projects when older ones complete. We need something like the Strategic Science Investment Fund for the university sector so we can reduce this insecurity and more specially recognise academic workforce development that integrates research with knowledge transfer through teaching more seamlessly (See *'Reduce early-career researcher precarity' in the UAG Briefing note on PBRF*).

Early career academics need consistent financial support for a period of time to establish their own research profile, as well as to develop their teaching credentials. They need the research profile that will allow them to successfully compete for external research funding and to progress up the promotion ladder. Even small research grants can make a very large difference to an academic being able to do useful research. A lot of this research funding comes from sources like PBRF and just growing PBRF is key in this area.

We also need more postdoctoral programmes to help bridge the gap between completion of a PhD and securing a permanent academic or industry position. These programmes see postdocs working on externally funded research projects and/or collaborative projects with a research team. They are usually mentored by more senior staff and there is often some

expectation that they will teach. By the end of the postdoctoral period they have the profile and experience to secure open-tenure employment within or outside academia.

<b>Approximate average annual salaries of postdoctoral scholarships</b>				
<b>Aus</b>	<b>US</b>	<b>UK</b>	<b>Canada</b>	<b>NZ</b>
NZ\$114,000	NZ\$100,000	NZ\$79,000	NZ\$78,000	NZ\$77,000

The main issue for New Zealand is the number of these postdoctoral fellowships that universities can afford. We should be offering more but can only do so with a substantial increase in funding – mainly via PBRF.

There has also been insecurity around our workforce caused by time-limited Government initiatives. For example, in 2016, the Government announced the Entrepreneurial Universities programme which would provide matched funding to universities to recruit world-class academic experts to New Zealand. It was very successful at bringing a number of extraordinary people here but was then wound up when the Government changed. Universities were left with the cost of the programme and will be rightfully wary about supporting similar initiatives in future.

Such initiatives can generate real value for both universities and the country, but they need to be long-term commitments supported by all the major political parties.

- 2. Equitable workforce.** We continue to have challenges in creating a more equitable workforce. Māori make up 7.1% of the university sector’s academic and research workforce as compared with 19.6% in the general population. Pacific make up 2.7% of the same university workforce and 8.9% of the general population (noting that methodologies for counting Māori and Pacific are different for universities and Statistics NZ). Women are still under-represented in more senior academic roles. Universities are actively working on these through professional development, mentoring, management practices, recruitment and promotion policies.