

**GROUP
OF EIGHT
AUSTRALIA**

15 ideas to deliver a seamless tertiary education system

Group of Eight Submission



Contents

Introduction	3
Executive Summary	5
<i>A principles-based approach to higher education in 2053</i>	6
<i>Go8 overarching design elements for higher education</i>	7
<i>Fifteen bold ideas to implement a seamless tertiary education and research system</i>	8
<i>Proposed National Tertiary Education and Research System</i>	9
1 Framing of the Go8 submission	10
2 A principles-based approach to higher education	13
<i>Go8 overarching principles for Australia's higher education system</i>	13
<i>Go8 premises to underpin the design of Australia's higher education system</i>	15
3 Overarching design elements for higher education	19
<i>A reframing of Federal/state relations</i>	19
<i>A seamless tertiary education system and, importantly, a target for attainment</i>	20
<i>A Tertiary Education Commission</i>	22
4 Bold ideas to implement a seamless tertiary education system	24
<i>Research</i>	24
<i>Education</i>	44
<i>Equity</i>	56
Appendix 1: Global trends and implications for Australia	62
Appendix 2: Experts contributing to the Go8 submission	64

Introduction

When a Federal Government gifts a sector with a blank canvas ‘Accord’ process in which to define and advocate for its future role and operating climate, then that sector owes its nation a bold and determined response.

It is from this base that the Group of Eight (Go8) Accord submission has been developed.

In acknowledging this, we note that this submission represents the views of the Go8 network and member universities may choose to make their own submissions with different emphases and level of detail.

Inspired quality tertiary education positioned well for a nation’s future is a societal gift.

For the Go8, this is the opportunity to contribute significantly with a response that is both values-based and economically astute, at the same time as being responsive to national cultural and social mores.

Inspired quality tertiary education positioned well for a nation’s future is a societal gift.

This submission is therefore aspirational for Australia, for the role and responsibility of universities in underpinning future economic and social prosperity.

In doing so, it looks to an Australia in 30 years – one that is shaped (and buffeted) by global economic, demographic, climate, and geopolitical influences. At the heart of this vision are our universities, and in particular, universities that bridge both the education and research system – research-intensive universities such as the members of the Go8.

Introduction

Universities and the overall education system are social infrastructure – essential to security, sustainability, prosperity, and social and economic wellbeing. Universities are the foundation of strong, healthy, and inclusive societies and are a powerful tool for overcoming entrenched socio-economic disadvantage.

Historically, all significant reforms of Australian higher education have been driven by a strong focus on nation building.

Australia's challenges are national and global. Like other nations, we will need an educated workforce – one that is prepared to flourish and lead in an uncertain and rapidly changing environment and one that reflects all parts of our community.

Excellent research and a research-equipped workforce with pathways into industry will be essential. As will ongoing support for fundamental research and research that ensures that ongoing strength of our humanities and social sciences.

Historically, all significant reforms of Australian higher education have been driven by a strong focus on nation building. These include the establishment of the Universities Commission (as well as Commonwealth scholarships and the founding of the ANU) by Curtin and Chifley, the creation of colleges of advanced education by Menzies, and the expansion of participation in higher education through the Whitlam, Dawkins, and Bradley reforms – the last with a particular focus on equity.

In a similar vein, the Universities Accord process is positioned to be genuinely nation building and this submission, in being bold and far-sighted, will concentrate on those high-level principles and system design changes that will deliver for our shared future.

Executive Summary

The Go8 submission uses a principles-based approach to outline the broad parameters of a higher education system required to ensure our future economic and social prosperity.

The Go8 has identified five overarching principles and three key premises for system design.

This principles-based approach, in turn, underpins three critical system design elements that are presented as 15 bold ideas across research, education and equity.

All of this work is to set up a future higher education system that has students at its heart – now and for generations to come. Our students are the major direct beneficiaries of tertiary education and in guaranteeing the entire system is able to provide a quality educational experience, truly accessible to all and leading to positive employment and life outcomes, we will be safeguarding the future of the Australian community and the nation as a whole.

All of this work is to set up a future higher education system that has students at its heart – now and for generations to come.

Executive Summary

A principles-based approach to higher education in 2053

Go8 principles and premises for Australia's higher education system

The Go8 has identified a series of **five high-level principles** that should inform the Accord process:

- **Principle 1:** Universities exist to serve society.
- **Principle 2:** Universities serve society through their missions of education and research.
- **Principle 3:** Education is primarily about growing and forming minds to generate an intellectually informed and agile population; a population able to add value to society now and into an often unknown but fast-evolving future.
- **Principle 4:** Research contributes to understanding the fundamental questions about existence at the same time as solving key problems to make a better and better-equipped world.
- **Principle 5:** Universities combine missions in education and research to enable Australia to thrive economically, socially, and culturally, and to take its rightful and significant place on the world stage.

Based on these principles the Go8 has also identified a set of **three key premises** that will underpin the design elements and bold ideas that are outlined in this submission.

- **Premise 1:** The education and research requirements of the nation are distinct but overlapping and mutually reinforcing. This premise must be reflected in the structure of Australia's higher education system.
- **Premise 2:** A differentiated higher education system is required to best address the needs of a successful society.
- **Premise 3:** In a differentiated system, institutions should be funded to carry out their *agreed* missions with minimal need for cross-subsidies.

Go8 overarching design elements for higher education

A reframing of Federal/state relations

A tertiary education system that will deliver what Australia needs in 30 years requires the re-envisaging and reframing of present Federal/state relations across education and research.

A seamless tertiary education system with a target for attainment

The tertiary higher education and vocational training systems should be redesigned to form an integrated training and higher education sector oriented to lifelong learning.

This sector should incorporate flexible pathways between vocational training and higher education in both directions and at various qualification levels – including research training. This new integrated sector would be supported by a redesigned

upper-secondary education and appropriately supported academic and vocational pathways.

Within this re-imagined sector, the Go8 recommends that we set a target of 75 per cent for the proportion of the Australian resident population aged 25–39 years who have attained or who are attaining a post-Year 12 or equivalent qualification by 2040.

A Tertiary Education Commission

We also recommend a Tertiary Education Commission that would be structured as an independent body to sit between government and the tertiary education sector. The role of the Commission, in general terms, would be to provide long term, coordinated, and expert advice to government on higher education policy matters. This would ensure that the tertiary education sector is established and maintained as a seamless sector, responsive to the changing needs of the Australian community and economy and with a continuity of approach across electoral cycles.

Executive Summary

Fifteen bold ideas to implement a seamless tertiary education and research system

Research

1. Development of a National Research Strategy, incorporating national science and research priorities
2. An overarching government body for research and innovation
3. Greater diversity of mission, scale and focus among universities delivering research
4. Full economic cost support for government research grants
5. A future fund for non-health and medical research with a strong link to basic research
6. Removal of the sector's reliance on international fee revenue, particularly for the funding of research
7. National Strategic Research Block Grants to support core research
8. Introduction of national doctoral training centres

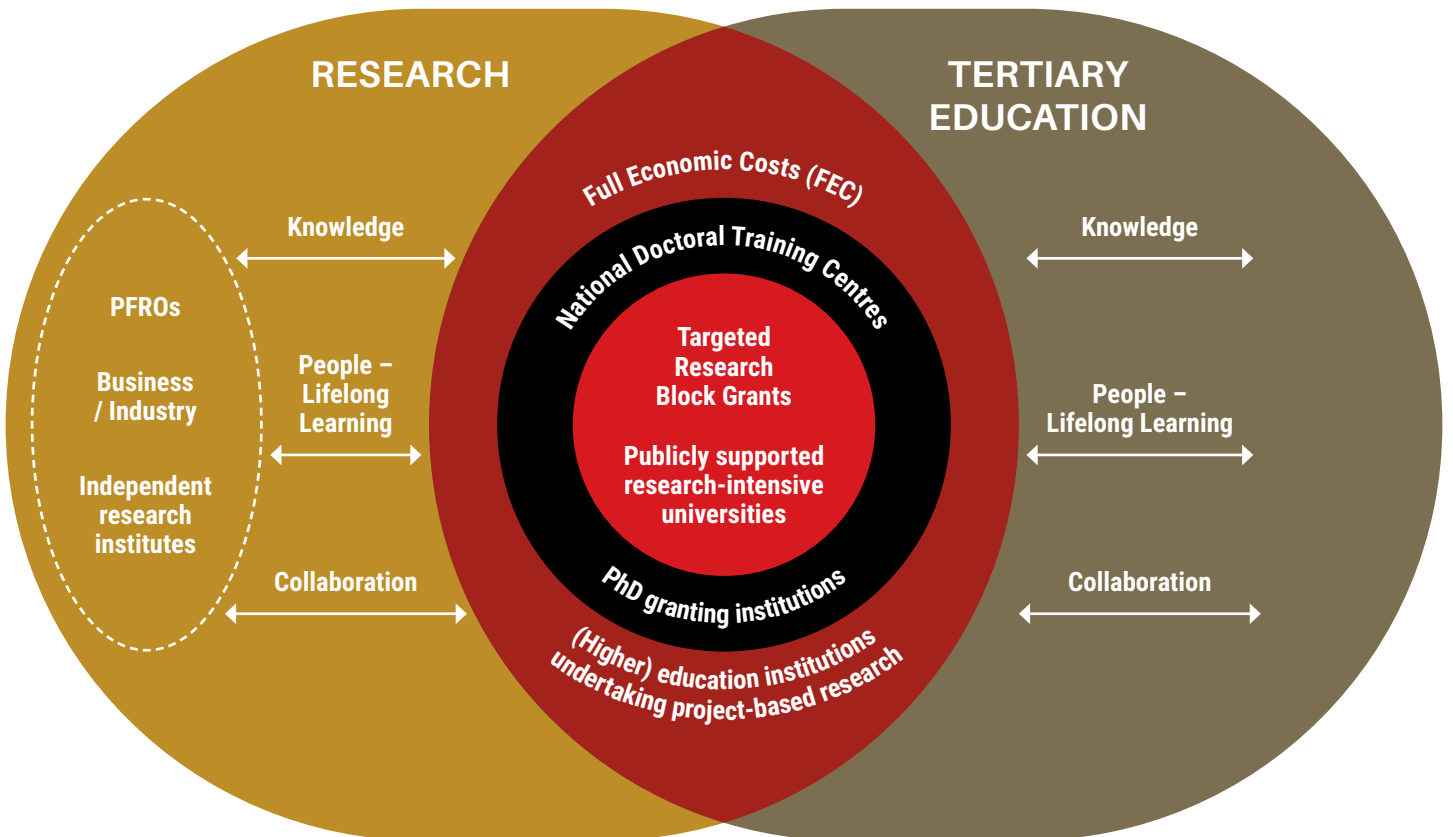
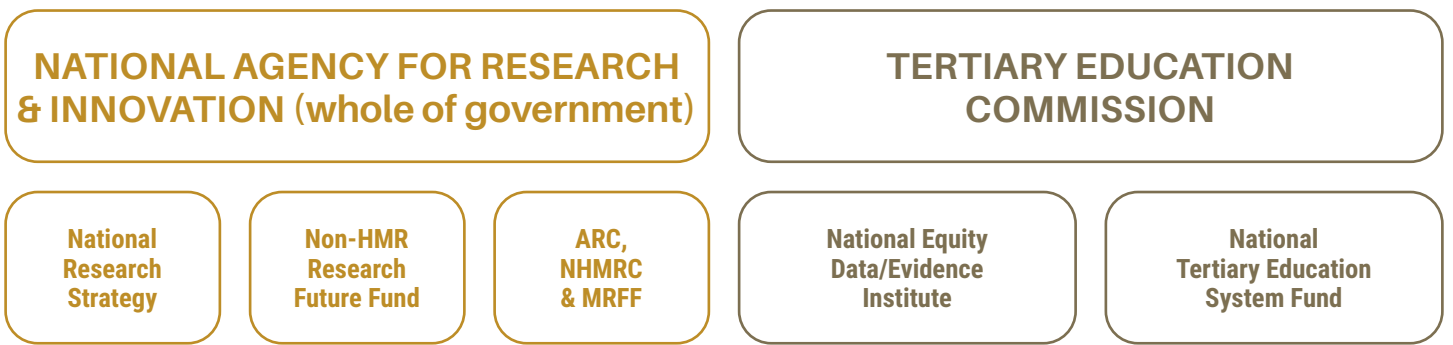
Education

9. Implementation of support for lifelong learning
10. Support for excellence and innovation in learning and teaching
11. Staged implementation of a flat-fee model for student contributions to government-funded places in higher education
12. A National Tertiary Education System Fund

Equity

13. Redesign of post-secondary education as a seamless tertiary education system supporting equity, mobility and pathways
14. Targeted, long-term, collaborative solutions and focused strategies that work across all levels of government to address impediments and barriers to equity in education
15. A National Equity Data/Evidence Institute

Proposed National Tertiary Education and Research System



1 Framing of the Go8 submission

In her foreword to the Australian Universities Accord discussion paper the Panel Chair – Professor Mary O’Kane AC – challenges the sector to re-imagine itself over a 10, 20 and 30-year horizon.¹

This places the Universities Accord process squarely as a critical moment in time. It is the opportunity for generational reform for Australia’s higher education system, one of the same order as both the Dawkins’ reform of the late 1980s – reform which still underpins our current system more than 30 years later; and the reforms following the recommendations of the Bradley review of higher education.

In accepting this challenge, the Go8 – representing Australia’s leading research-intensive universities – looks not to issues and problems with the *current* higher education system, but rather to what Australia will require of us as we progress towards 2053.

The Go8 submission does not focus on addressing current operational issues (many of which are important)

but rather outlines ideas that Go8 members collectively believe will be needed to underpin Australia’s economic and social well-being.

The Go8 believes the framework presented in this submission represents a path forward that can be contested and amplified as we progress to the final report of the Universities Accord process and beyond.

No-one can know with accuracy and certainty what Australia and the world will look like over a 10, 20 and 30-year horizon. The Go8 submission is framed by a broad understanding of relevant national and global trends, informed by some forecasting (Appendix 1) but the proposed system is also designed to ensure flexibility and resiliency to respond to changing circumstances.

¹ Australian Universities Accord Discussion Paper: February 2023.

At a high-level, the Go8 submission identifies three core roles for a future national tertiary education system:

- **Research:** Australian universities are the engine-room of the nation's research, generating the ideas, knowledge and people at the heart of a strong civil and progressive society. It is research which will underpin national well-being, drive productivity and link us to the world's "knowledge trade routes".
- **Education:** Australia must have education that can develop the citizens and capability base the nation needs, and as a platform for the global engagement that comes from a seamless tertiary education sector.
- **Equity:** Both to deliver a more equitable nation through education, and in the way the sector itself operates. Equity and Excellence in Australian higher education go hand-in-hand. Supporting opportunity and inclusion for all Australians also ensures that Australia derives maximum benefit from its tertiary education system.

As such, the higher education sector – and particularly research-intensive universities – are positioned not just at the core of the tertiary education system but also at the intersection of education and the research and innovation system, international relations, and social and human services.

Supporting opportunity and inclusion for all Australians also ensures that Australia derives maximum benefit from its tertiary education system.

Consequently, the Go8 submission is focused on these three themes of research, education, and equity within higher education and the critical interactions of these themes with policy areas outside of education.

Framing of the Go8 submission

Research-intensive universities integrate both research and education, delivering research-informed undergraduate education, undertaking research, and conducting research training at postgraduate level.

In 2022, Go8 members earned nearly 70 per cent of all research income reported by universities, with a further six institutions taking this to over 80 per cent.

However, this research mission is neither a necessary nor concentrated focus for all providers across higher education and broader tertiary education sector. In 2022, Go8 members earned nearly 70 per cent of all research income reported by universities, with a further six institutions taking this to over 80 per cent.

Research conducted by Go8 members represents 20 per cent of Australia's total national investment in R&D. The majority of this national R&D is undertaken by business (even though there has been a serious decline in business investment in R&D as a percentage of GDP) with limited connections to education.

Given this, the Go8 defines within this submission bold ideas to maximise the contribution of research-intensive universities.

2 A principles-based approach to higher education

Go8 overarching principles for Australia's higher education system

Principle 1: Universities exist to serve society.

Universities have a social contract with the community to improve the lives of all Australians – directly and indirectly. As the Go8 has constantly set out, “you don’t have to attend university to benefit, everyone in the community benefits”. Universities defend our national economic, social and environmental, well-being. They also enable Australia to make a constructive contribution to global well-being.

Universities have a strong role to play, along with schools and other institutions, in educating culturally flexible and globally minded citizens.

Universities should provide opportunities for all youth and young adults, including those living in disadvantage to equip themselves with the knowledge and education needed to pursue fulfilling and successful lives.

Principle 2: Universities serve society through missions in education and research.

Universities are the creators and connectors which underpin the generation and communication of knowledge through both education and research.

As the Go8 has constantly set out, “you don’t have to attend university to benefit, everyone in the community benefits”. Universities defend our national economic, social and environmental, well-being. They also enable Australia to make a constructive contribution to global well-being.

A principles-based approach to higher education

Principle 3: Education is primarily about growing and forming minds to generate an intellectually informed and agile population; a population able to add value to society now and into an often unknown, but fast-evolving future.

University education is essential for us all to flourish in a rapidly changing economy and society.

The effectiveness of Australia's university sector underpins the productivity of the Australian economy and the cultural, intellectual and moral richness of the nation. This is through our education, our fundamental research, and our commitment to translation and commercialisation.

Principle 4: Research contributes to understanding the fundamental questions about existence while also solving key problems to make a better and better-equipped world.

The effectiveness of Australia's university sector underpins the productivity of the Australian economy and the cultural, intellectual and moral richness of the nation. This is through our education, our fundamental research, and our commitment to translation and commercialisation.

Principle 5: Universities combine missions in education and research to enable Australia to thrive economically, socially, and culturally, and to take its rightful and significant role on the world stage.

Through education, research, development and debate, universities provide a critical voice that supports Australia's role on an international stage.

Go8 premises to underpin the design of Australia's higher education system

Premise 1: The education and research needs of the nation now and into the future are distinct but overlapping and mutually reinforcing. To ensure they are successfully and efficiently delivered upon, this must be reflected in the structure of Australia's higher education system.

Research intensive universities play a critical role in both education and research, but greater clarity is required in relation to how these two elements of the system are funded and supported.

Premise 2: A differentiated higher education system is required to best address the needs of a successful society.

The Australian higher education system consists predominantly of 40 public universities with a common mission to provide comprehensive teaching and undertake research.² In Australia, the term 'University' comes from the Higher Education Support Act (2003)³ that distinguishes a university as a place where both teaching and research take place. As such, Australian universities are undifferentiated in terms of their core activities, that is, teaching and research.

The education and research needs of the nation now and into the future are distinct but overlapping and mutually reinforcing.

² Davis G. *The Australian idea of a university*. Melbourne: : Melbourne University Press 2017.

³ See Federal Register of Legislation. Higher Education Support Act 2003. Attorney-General's Department 2018.

A principles-based approach to higher education

Other higher education systems contain several types of institutions. In the United States, the Carnegie Classification distinguishes Doctorate Granting Universities, Masters Colleges and Universities, Baccalaureate Colleges, Associate Colleges, Special Focus Institutions, Tribal Colleges and other Institutions not classified. Of the 4300+ universities in the United States, just over 400 are doctorate granting institutions that carry out teaching and research. These 400 correspond to the Australian idea of a university. The remaining 3900 specialist teaching and discipline-specific institutions have no Australian equivalents.

Germany also has a differentiated higher education system consisting of universities, colleges, vocational schools, colleges of music and art,

and others. Classical comprehensive (generalist) universities sit alongside specialist advanced technical institutions. In contrast, in the United Kingdom, universities follow the common model found in Australia.⁴

Differentiated systems allow different kinds of institutions to pursue specific missions and to be resourced accordingly. They provide increased student choice, and, through allowing specialisation and concentration they are more effective, because institutions can be funded according to their mission. They allow different forms of excellence to coexist across the sector and reduce sector-wide vulnerability to internal or external disruption such as the most recent experience of global travel restrictions shutting off the supply of international students.⁵

4 Wolf, A. Degrees of failure: why it's time to reconsider how we run our universities. *Prospect Mag* 2017. <https://www.prospectmagazine.co.uk/magazine/degrees-of-failure-do-universities-actually-do-any-good>

5 See Davis G. *The Australian idea of a university*. Melbourne: Melbourne University Press 2017.

Specialist institutions can concentrate on excellence where they excel, that is, in undergraduate teaching, disciplinary specialisation, advanced research and education, professional training, comprehensive research programs or more focused ones.

Differentiation of higher education institutions in Australia will be critical to building the pathways necessary for a seamless tertiary education and a research system.

Premise 3: In a differentiated system, institutions should be funded to carry out their agreed missions with minimal requirement for cross-subsidies.

Cross-subsidies from student fees (from both domestic and international students) to much needed research funding in higher education institutions is well known, both in Australia and other nations.

In general, this cross-subsidisation involves 'surplus' net income from teaching being used to fund research that can be relatively expensive, especially when overhead and other indirect costs are taken into account. Cross-subsidisation can also occur between levels and fields of teaching – subsidisation from courses where the income from student fees exceeds costs, to courses where the reverse is the case.

Despite cross-subsidisation helping fund potentially vital activities such as research and teaching in fields of importance that would not otherwise be financially viable, there are valid concerns regarding the influence of cross-subsidies on students, education providers, and on the overall system.

Differentiation of higher education institutions in Australia will be critical to building the pathways necessary for a seamless tertiary education and a research system.

A principles-based approach to higher education

These include the creation of perverse incentives. Moreover, the composition of student places offered may be tilted towards courses able to deliver a surplus (even as cross-subsidies allow for low demand courses to be maintained). In turn, this may translate to oversupply of graduates in some fields, and undersupply in other fields. Hence these perverse incentives can potentially lead to sub-optimal educational quality and student outcomes.

Allocation of resources may also be less than optimal because of cross-subsidies. Cross-subsidies may not necessarily be allocated based on criteria such as the quality and importance of research or teaching fields. Hence apart from being a less transparent use of resources, inefficient outcomes can result from misallocation.

To have a tertiary education sector that is diverse in its offerings requires a diversity of providers.

This is currently not supported by the Australian system. To enable a differentiation of the system, reliance on cross-subsidies must be minimised.

This is particularly the case with research where undertaking public research commissioned through the ARC, NHMRC, and MRFF requires significant cross-subsidy (at least \$1 of additional funding for every \$1 of grant funding). The same holds for the hosting of national research infrastructure. For the Go8 members, this significant cross-subsidy⁶ is, in the main, sourced from the revenue of a sizeable cohort of fee-paying international students.

⁶ In the 2020 ABS Survey of Research and Experimental Development, Higher Education Organisations, Australia Go8 members reported a collective \$3.9 billion in research expenditure sourced from General University Funds, equal to 51 per cent of the \$7.7 billion total investment in research.

3 Overarching design elements for higher education

The Go8 recommends three overarching design elements to deliver on the principles and system-based approach that has been outlined.

A reframing of Federal/state relations

Constitutionally, education is the responsibility of the states with the Federal government contributing to funding at all levels.

The starkest Federal/state divide in education is between vocational education and higher education. States are the major public providers of vocational education through the TAFE system (although there is a national regulator – ASQA – for the vocational education and training sector).

The starkest Federal/state divide in education is between vocational education and higher education.

In higher education, while all public universities – except for the Australian National University – are established under state/territory legislation, public funding for universities is almost entirely provided by the Federal government. Regulation, and even the ability to be accredited to use the name “university” is under Federal legislation and undertaken by a Federal agency – TEQSA.

To implement a higher education system that will deliver what Australia needs in 2053 a re-envisaging and reframing of Federal/state relations is required to deliver a more coordinated and effective system.

This is essential for two key elements of the Go8 submission: a seamless tertiary education system across both vocational and higher education; and a system of Federal funded research-intensive universities which operate in a hub and spokes style collaboration with the rest of the university system.

Overarching design elements for higher education

A seamless tertiary education system and, importantly, a target for attainment

The higher education and vocational training systems should be redesigned to form an integrated tertiary education sector oriented to lifelong learning. This sector should incorporate flexible pathways between vocational training and higher education **in both directions** and at various qualification levels – including research training. This new sector should comprise a redesigned upper-secondary education with appropriately supported academic and vocational tracks/pathways.

The Go8 believes it is important to set a target for attainment in order to realise a seamless tertiary education system capable of meeting Australia's needs towards 2053.

The Bradley review target of 40 per cent of the Australian resident population aged 25–34 years attaining a bachelor qualification or higher has already been achieved. The Go8 recommends that in a reimagined Tertiary Education System, the target for attainment should be higher and broader than a bachelor qualification.

With the predicted high demand for post-school or tertiary qualifications, attainment targets should be framed against tertiary education qualifications of post-Year 12 equivalence.

The Go8 suggests consideration of a target of 75 per cent of the Australian resident population aged 25–39 years attaining a post-Year 12 or equivalent qualification by 2040, to ensure we are on a path to the system we need by 2053.

Not explicitly addressed are attainment targets in tertiary education for underrepresented or disadvantaged groups, and pathways in tertiary education between vocational and higher education.

These require separate consideration in relation to evidence of participation and success in tertiary education by different groups, and the barriers to pathways in tertiary education.

Instead, the target as considered by the Go8 applies to all in the relevant age group noting that the path to successfully ensuring access and equity for all requires separate discussion, and series of changes, with which to successfully address that aspiration.

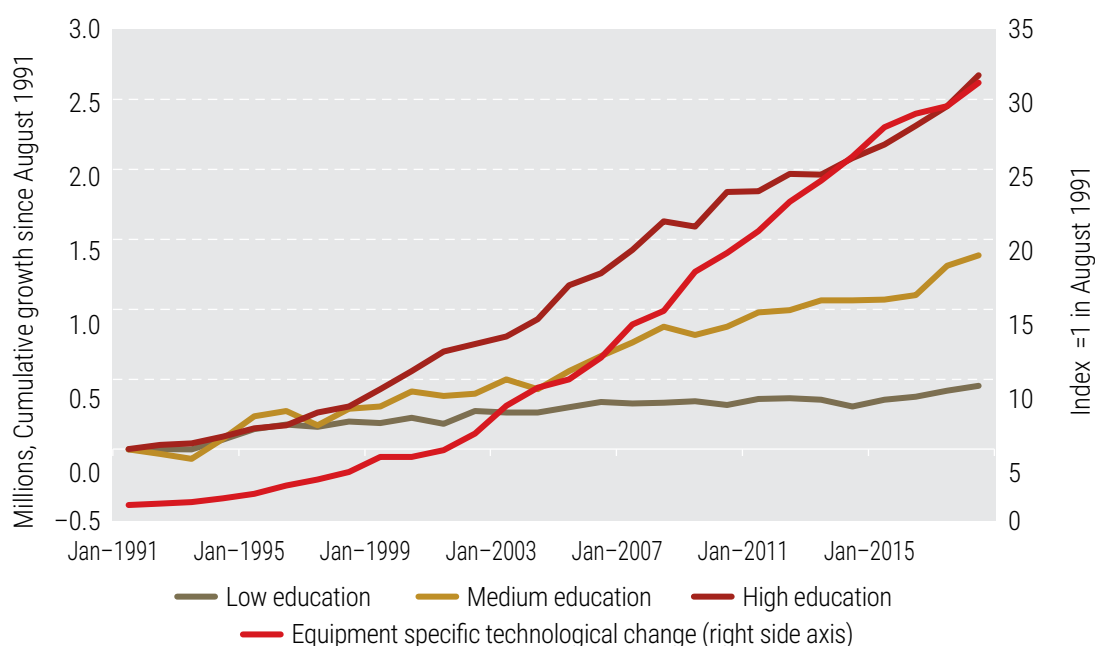
Skill biased technical change

Skill-biased technical change is a shift in the economy that favours more skilled (for example, more educated) people over less skilled people.

Through technological change requiring more skilled employees, it increases their relative productivity, and therefore demand for their labour and delivery of relative wages.

This chart illustrates growth in technological change is associated with relatively stronger growth in employment that requires employees with higher education levels.

For Australia, skill biased technological change has been recognised by the Productivity Commission as pervasive across industries and “the existence of a technical change bias in the use of skilled workers is found regardless of existing relative labour use (i.e., skilled or less skilled intensive industries)”.⁷



Sources:

For growth in employment by education requirement:

- Heath, A. (2020). Skills, technology and the future of work, Speech to Career Education Association of Victoria and Victorian Commercial Teachers Association Work Futures Conference, Reserve Bank of Australia.
- Group of Eight. (2019). Priority directions 2: three essentials for future economic success.

For equipment specific technological change – Go8 calculations using ABS national accounts data:

- Australian Bureau of Statistics. Australian national accounts: national income, expenditure and product. <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-national-income-expenditure-and-product/latest-release>

⁷ Laplagne, P., Marshall, P., & Stone, S. (2001). The role of technology in determining skilled employment: an economywide approach. *Productivity Commission Staff Research Paper*, AusInfo.

Overarching design elements for higher education

A Tertiary Education Commission

The scale and reach of public higher education and vocational education presents a particular governance challenge at a system level.

The disincentive to invest in some areas of education, and incentive to invest in others, leads to oversupply in some disciplines and geographical areas, and undersupply in others.

Universities and other public higher education providers have significant public obligations, yet they face a funding environment where there is little certainty year to year. There is an incentive for them to maximise overall revenues, invest in high margin

areas and to seek growth to mitigate the risk of inadequate year to year resourcing. The disincentive to invest in some areas of education, and incentive to invest in others, leads to oversupply in some disciplines and geographical areas, and undersupply in others.

Equally, governments face a difficult challenge to ensure the system responds to national needs and purposes. Where universities and other providers are acting legitimately to deliver education and research within their own remit, there is a risk that outcomes can still be undesirable. This can occur through suboptimal allocation of higher education resources, and places across the system which may then not, for example, meet labour market or student demands.

Where competitive and other mechanisms have been implemented to assist resolve this issue (such as the Demand Driven System) they have been either fiscally unsustainable or have simply have not addressed the issue.

Meeting these challenges suggests that structures are needed to facilitate better coordination and consistency across the system. Such structures must, at the same time, ensure universities and other higher education providers maintain autonomy over their operations. This underpins their capacity to deliver quality teaching and research.

The Go8 suggests that these challenges can be addressed by a **dedicated expert Tertiary Education Commission** appointed by government but independent from it; a commission which is able to provide transparent advice on funding and other matters, as well as offer a formalised system-wide dialogue between different stakeholders to resolve problems.

The purpose of the Commission is to enhance the operation of the Australian higher education and tertiary education sectors, ensuring they can meet the needs of the different stakeholders by:

-
- Providing expert advice to the Federal government on matters of significance for Australian higher education and tertiary education, including funding allocation and other matters within the Federal remit, the prescribed mechanisms and a funding envelope advised by government, and with a requirement to publish advice to ensure transparency.
 - Acting as a convener to assist in brokering accords or other agreements between public higher education providers and government, such as funding agreements.
 - Undertaking research and collecting higher education data, including publishing reports on the sector on matters of significance, including higher education and tertiary education.

4 Bold ideas to implement a seamless tertiary education system

Research

Research is critical to Australia's future economic, environmental, and community well-being. This will become even more so as we look to a 30-year horizon where innovation will underpin success in a technology and information driven global economy, and where international research collaboration will continue to provide solutions to global challenges.

Australia will need to invest in its national security through defence and cyber security, find solutions in health care delivery for an ageing population, and continue to develop a better understanding of ourselves as a nation to promote social cohesion and safeguard our democratic system.

To respond to this obvious national need for quality research, Australia must take a systems approach to its research needs and ambitions, one that supports and coordinates research across government and government agencies, universities, business, independent research institutes, and philanthropic and community bodies – wherever research occurs.

... we look to a 30-year horizon where innovation will underpin success in a technology and information driven global economy ...

The approach must also support the range of research and research related activity that is required from basic research through to applied research and experimental development, including the translation and commercialisation of research.

At the heart of this national research effort are universities and in particular the Go8 members. Collectively the Go8 members invest \$7.7 billion in research annually with over half of this expenditure representing cross-subsidisation from “General University Funding” – funds not tied specifically to research activity.

The ideas in this section outline an approach to a national system of research and the provision of sustainable funding for the engine room of the research system – universities and basic research – as well as the future research workforce to undertake Australia’s research.

Collectively the Go8 members invest \$7.7 billion in research annually with over half of this expenditure representing cross-subsidisation from “General University Funding” – funds not tied specifically to research activity.

Bold ideas to implement a seamless tertiary education system

R&D by sector as a percentage of Gross Domestic Product (GDP), Australia

The chart shows R&D expenditure by sector as a percentage of Australian GDP (data for each sector is not available for all years).

Business sector expenditure on R&D (BERD) has declined from 1.37 per cent of GDP in 2008 to 0.92 per cent in 2019.

Australia's R&D investment performance has increasingly become reliant on the higher education sector. Expenditure by the higher education sector on R&D (HERD) has steadily increased from 0.40 per cent of GDP in 2000, to 0.61 per cent of GDP.

Government expenditure on R&D (GOVERD) has declined from 0.33 per cent of GDP in 2000, to 0.17 per cent of GDP in 2020.

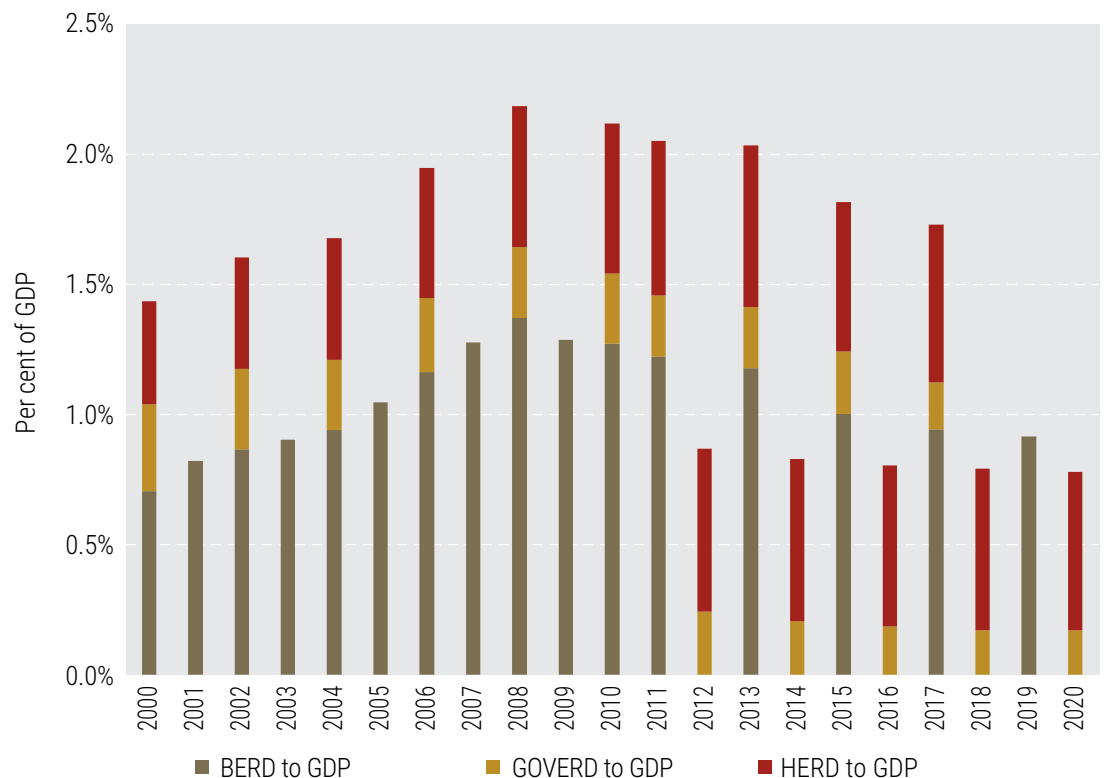
Notes and Sources:

HERD, BERD, and GOVERD data are collected separately with time lags between the collections, as reflected in the chart.

Private not for profit organisations which contribute less than 4 per cent of total R&D expenditure are excluded from the chart. BERD and GOVERD data are on financial year basis.

Department of Industry, Science, Energy and Resources: <https://www.industry.gov.au/sites/default/files/minisite/static/e809cbb0-a803-4827-a45b-51598ba272b2/australian-innovation-system-monitor/science-and-research/index.html>

Australian Bureau of Statistics: <https://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-businesses-australia/latest-release>



Development of a National Research Strategy, incorporating national science and research priorities

Australia has a strong track record in “punching above its weight” in research – led by Go8 members. Given Australia’s population size and number of universities, research performance across the board is very strong and continues on an upward trajectory. However, this success is built on instability.

Funding for research in the higher education system is vulnerable and no longer sustainable in a rapidly changing environment marked by the growth of China, rising international investment in Europe, and a more contested international environment.

In addition, Australia’s investment in its national research effort has stagnated, and at 1.8 per cent of GDP is nowhere near the three per cent of GDP that government indicated should be an objective.

Universities play a major role in the current R&D landscape. Higher education’s share of total R&D spending has risen by 12 percentage points since 2008 to 37 per cent of total R&D expenditure in 2020. But that is not enough, and it is putting enormous pressure on university resources as outlined above.

In order to have a truly national system of research which is fit for the future, Australia needs a national research strategy which provides a coordinated approach to research funding, focus and governance.

Higher education’s share of total R&D spending has risen by 12 percentage points since 2008 to 37 per cent of total R&D expenditure in 2020. But that is not enough, and it is putting enormous pressure on university resources ...

Bold ideas to implement a seamless tertiary education system

A core focus of the strategy must be to provide a sustainable approach for supporting basic research at Australian universities. This is at great risk of being severely compromised and will have grave consequences for the future.

A central aspiration or target of this strategy must be for Australia to progress from the current level of 1.8 per cent of GDP invested in R&D – well below the OECD average of 2.7 per cent – to 3 per cent of GDP. We believe achieving this target will require a collective effort between governments, universities, the private sector, and the broader community. The Go8 is committed to working collaboratively to achieve this.

A key factor in achieving this target will be for business expenditure on R&D (BERD) to rise from the current level of 0.92 per cent of GDP, which currently lags the OECD average of 1.92 per cent and is well below what it was 15 years ago (at 1.37 per cent).

The National Strategy should outline not only how the system can incentivise increased R&D expenditure in the short term, but also how universities and the private sector can be supported to facilitate a step change in industry R&D through both direct research collaboration and increasing the “absorptive capacity” of industry for research through a research trained workforce.

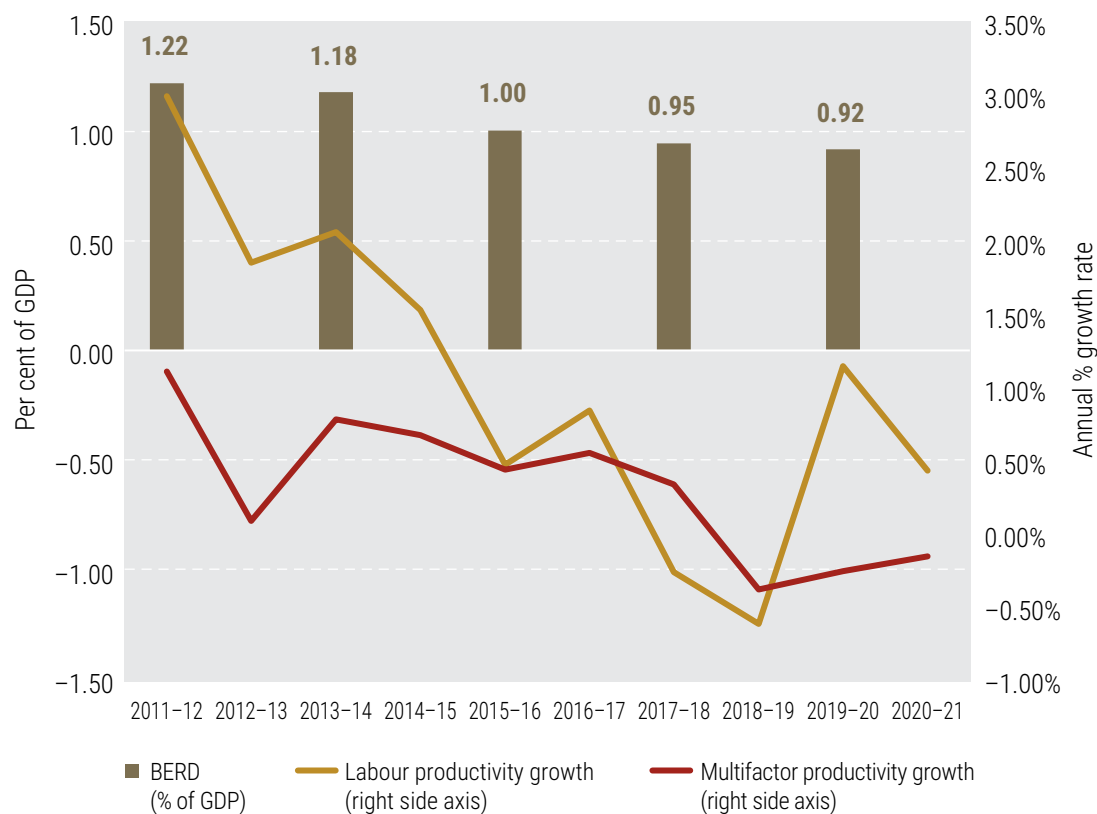
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Business sector expenditure on R&D (BERD) and Australia's productivity growth

The chart shows that the reduction in R&D expenditure as a percentage of GDP by the business sector (BERD) correlates with a drop in Australia's productivity performance over the past decade.

Not only has BERD as a per cent of total R&D expenditure declined in Australia, but the share of R&D funding received by higher education institutions from the business sector has also declined, albeit from an already low base.

The percentage of HERD funded by the business sector has declined from 6.1 per cent in the mid-2000s to 4.8 per cent in 2020.



Sources:

Australian Bureau of Statistics. Estimates of industry multifactor productivity. <https://www.abs.gov.au/statistics/industry/industry-overview/estimates-industry-multifactor-productivity>

Australian Bureau of Statistics. Research and experimental development, businesses, Australia. <https://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-businesses-australia/latest-release>

Bold ideas to implement a seamless tertiary education system

In addition, the Go8 believes that a national research strategy should:

- Recognise, prioritise, and enhance funding of research in Australian universities as an essential component of Australia's economic future – including through national science and research priorities.
- Embrace diversity, recognising research is valuable in all its forms, from basic to applied, HASS through to STEM, and also that it is hard to predict which disciplines will matter most in the future. Australia should aspire to be one of the leading research systems in the world that encourages and supports multidisciplinary approaches to the world's greatest challenges.
- Improve the incentives for Australian universities to conduct research by providing secure and sustainable funding to university research programs.

-
- Support further collaboration between industry and universities on R&D effort to build scope and scale.
 - Enhance the quantum and quality of domestic researchers – through PhD training support, as well as migration policy settings to attract and retain world-leading university researchers and educators.
 - Support Australian university researchers' access to international collaboration and funding, including through free trade agreements and access to large international research funding sources such as Horizon Europe.

Further details are provided in the Go8 policy brief *The Need for a National Research Strategy*.⁸

⁸ <https://go8.edu.au/policy-brief-national-research-strategy>

An overarching government body for research and innovation

Consideration should be given to implementation of a **single overarching government agency for a whole of government approach to managing policy and funding for research and innovation**. This new agency would develop and have carriage of implementing the National Research Strategy.

Another key task for the new agency would be to **rationalise and coordinate government funding programs for research and innovation**. According to the 2021–22 Science, Research and Innovation budget tables published by the Department of Industry, Science and Resources,⁹ the Commonwealth government invested \$11.8 billion in research over 2021–22 through 157 distinct programs across 12 portfolios with the major portfolios

being Education, Industry and Health. Australia is too small to have such a fragmented research funding system.

We need greater collaboration and more integration between the different funding bodies to provide greater economies of scale for our research efforts, reduce the bureaucratic burden on researchers and their institutions, and to encourage greater collaboration between the different components of the research system.

... the Commonwealth government invested \$11.8 billion in research over 2021–22 through 157 distinct programs across 12 portfolios with the major portfolios being Education, Industry and Health. Australia is too small to have such a fragmented research funding system.

⁹ <https://www.industry.gov.au/publications/science-research-and-innovation-sri-budget-tables>

Bold ideas to implement a seamless tertiary education system

Noting the interdependency of the national research and education missions articulated in Go8 Premise 1, the agency would need to work closely with the proposed Tertiary Education Commission, to ensure alignment and interoperability of Australia's research system with the seamless tertiary education system.

A new agency could also bring together the ARC, NHMRC, MRFF and other schemes in a way that drives greater collaboration, efficiency and crucially, advocacy and public engagement around research more generally.

In doing so, this could provide a simplified, transparent and more stable stream of research funding

for universities, easily navigated for discovery/basic research, mission-based research, industry collaboration, research infrastructure.

Research infrastructure would be an important component of the responsibilities of the agency.

While Australian research has been well served by the National Collaborative Research Infrastructure Strategy (NCRIS), this does not provide a holistic or guaranteed sustainable source of research funding.

In supporting Australia's research infrastructure, the agency should create incentives for institutions to collaborate in building and maintaining core research infrastructure, rather than them investing their own resources as a means of competitive advantage that might or might not serve the best interests of the wider community.

Taking a national approach to core research infrastructure would also offer another means to lessen universities' reliance on international student fees to cross-subsidise the costs of research.

Taking a national approach to core research infrastructure would also offer another means to lessen universities' reliance on international student fees to cross-subsidise the costs of research.

In particular, strategically managing research infrastructure requires:

- Adopting a holistic approach to funding for national research infrastructure, that includes funding not only for the infrastructure, but also for the ongoing maintenance and operation of the infrastructure and the skilled workforce required to support world leading facilities. All universities would be eligible to compete for infrastructure funds, but the emphasis would be on identifying opportunities to build scale, taking advantage of local research strengths and critical mass, including those in the private sector and broader community.
- Ensuring that funding for national research infrastructure should include a principle that custodians and users leverage the infrastructure

wherever possible to seek out, promote and enable productive engagement and partnerships between researchers, industry and the broader community.

- Including explicit provision for researchers to access priority international research infrastructures as well as Australia's participation in globally leading-edge research consortia and collaborations.

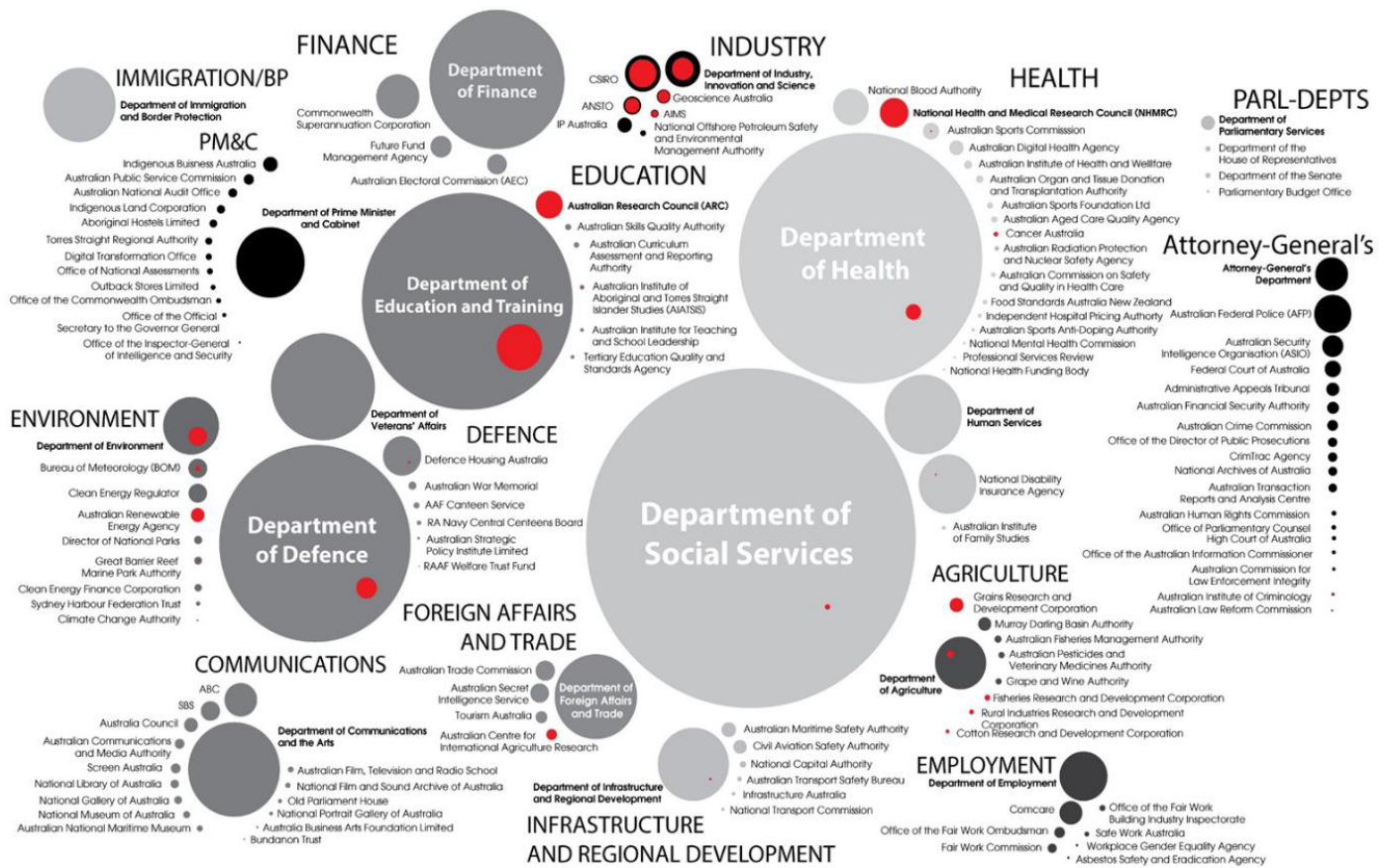
Consideration could be given to a future fund for ongoing research infrastructure funding.

Finally, the agency should ensure better national level data on research – including from universities – is collected, analysed and published to ensure excellence in research is identified and supported, and for use in planning for Australia's strategic research needs.¹⁰

¹⁰ As just one example where research data could be enhanced, the ABS does not currently collect national level R&D expenditure statistics – instead conducting separate and time lagged surveys of higher education, business, and government spending on R&D. This leaves Australia out of step with standard OECD reporting and unable to publish statistics on indicators such as national expenditure on basic research – a standard OECD metric.

Bold ideas to implement a seamless tertiary education system

The Australian Research landscape - research funding in red - ARC 2018



Source: ARC analysis of 2017–18 Budget Tables, contained in the ARC submission to the House of Representatives Inquiry into Funding Australia's Research, 2018.

Greater diversity between universities in delivering research

One of the Go8 overarching design premises is for a more differentiated higher education system (Premise 2). This is particularly the case for research. Research excellence can be found across many different institutions in Australia and at different stages in the research life cycle. Australia should be encouraging greater specialisation and more collaboration across the full spectrum of research – from basic to applied and industry specific – as well as at different points in the knowledge generation life cycle.

Australia should consider encouraging the development of distinctly Australian equivalents of Caltech in the USA, the London School of Economics and Political Science in the UK, or the Fraunhofer Gesellschaft Institutes in Germany, just as it should also seek to have a certain number of globally leading comprehensive and research-intensive institutions,

as well as institutions shaped by their geographic location and deeply embedded in the communities they serve.

For a National Research Strategy to be successfully implemented, the funding model will need to recognise this diversity, as well as the importance of collaboration and movement between institutions. A necessary small number of institutions may be formally designated Federal research-intensive universities in order to strategically coordinate research capability with critical mass. Others may be designated centres of research excellence in particular areas, or with a focus on strategically significant capabilities linked to their location and areas of strength.

Although this may appear a radical idea – and in some ways it is – the Go8 notes that in 2020 only eight universities reported over 45 per cent of total expenditure on research with a further four reporting between 35 and 45 per cent.

Bold ideas to implement a seamless tertiary education system

Also, in the 2018 Excellence in Research for Australia (ERA) assessment only five institutions received ratings of above or well above world standard in more than 80 different fields of research.¹¹ Three universities received these ratings in between 50 and 80 fields, and the remainder were rated at least above world standard in fewer than 50 research fields.

Thus, some differentiation has already occurred in the system albeit in an unplanned and haphazard way. Australia must embrace a more systematic and dynamic approach that includes deciding on the level of differentiation required and how it will be supported. The nation cannot afford to have its research investment stretched too thinly, or without consideration as to how best to create scale and collaboration in areas of critical national importance.

One way to implement such a formal differentiation would be to adopt a model under reframed Federal/state relations in which research-intensive institutions¹² with dedicated funding to support strategic research activity and capability in line with the National Research Strategy.

These Federal institutions would act under a “hub and spokes” model to support research in other universities who, at the same time, would continue to be able to access competitive project-based research funding to ensure the nation was supporting research excellence wherever it was to be found.

Other institutions would be funded on the basis of their specific specialty, including in specific areas of research excellence, or more focused on undergraduate training and development.

11 Australian Research Council. State of Australian University Research 2018–19: ERA National Report. Canberra: 2019.

12 Currently only the Australian National University is established under Commonwealth legislation.

Full economic cost support for government research grants

In 2020 Go8 members invested a total of \$7.7 billion on research. Thirty-three per cent of this was funded directly from the Federal government and 51 per cent (or \$3.9 billion) from General University Funds¹³ – the latter largely from international student fees.

Specifically, for critical public research commissioned by Government through the NHMRC, the MRFF and the ARC the Go8 estimates that on average this research is undertaken at a 45 per cent loss to universities.¹⁴

The support needed to complete government research projects from energy costs and building maintenance, to essential technicians, librarians and other professional

support, is now only approximately 20 cents in each dollar of external research funding earned by Australian universities. Increasingly, universities are also being asked to co-contribute direct costs (for instance, supplementing researcher salaries on NHMRC grants).

Go8 universities fund this significant and structural funding deficit largely through discretionary revenue sources, including international student fees.

Not only does this ignore the fact that universities are *research providers not research funders*, but it also means that Australia's national public research effort is subject to the variabilities of the international student market – a vulnerability that the COVID-19 pandemic demonstrated is simply not sustainable.

¹³ General University Funds are discretionary funds not tied to specific research.

¹⁴ The Go8 conservatively estimates that every \$1 in research income requires \$1.20 in indirect cost funding to support it with only approximately 20c currently earned through Research Block Grants for this purpose.

Bold ideas to implement a seamless tertiary education system

Premise 3 states that institutions should be funded to carry out their *agreed* missions – including in research – with minimal requirement for cross-subsidies. Under this design premise, research funding should be largely separated from revenue from international students.

The way to achieve these outcomes is to provide research grants with the *full economic cost (FEC)* – that is the total funding required to undertake the project.

This would mean that each research project would be financially viable as a standalone project and allow universities to have complete discretion and flexibility to undertake

as much or as little grant-based research as aligns with the strategic priorities of the institution and that the excellence of researchers at the institution allows.

It would remove the need for universities to cross-subsidise the costs of research from teaching and other revenue and, in the context of a national research strategy, provide further incentives to focus on areas of strength.

As such, the Go8 recommends that government:

Develop and implement a policy and targets for funding the full economic cost of government funded research that applies across the whole of government (including states and territories) and across all sectors engaged in research.

In a research funding environment where the funding pie is fixed, this will result in fewer research grants being awarded but those that are will be better funded and likely to deliver better outcomes overall. As such any move towards an FEC approach would likely need to be implemented through a staged process.

The way to achieve these outcomes is to provide research grants with the full economic cost (FEC) – that is the total funding required to undertake the project.

A future fund for non-health and medical research with a strong link to basic research

One of the most significant recent Government initiatives in support of research was the creation of the Medical Research Future Fund (MRFF). The MRFF has reached its full capitalisation target of \$20 billion and the earnings from this fund are used to fund \$650 million in translational health and medical research annually. Research funded under the MRFF directly targets health outcomes for the Australian community and in doing so the importance of the MRFF cannot be overstated.

This focus on translational research is critical as it is the way in which the Australian community takes full advantage of Australia's world leading research sector. However, this is should surely not just be the case for medical research, but for all research?

This is why the Go8 has previously recommended the creation of an *Australian Research Translation Future Fund (ARTFF)*.¹⁵ This was also a recommendation of the review by the House of Representatives Standing Committee on Employment, Education and Training (Recommendation 14, 5.7.1).

The ARTFF would support translational research enabling non health/medical applications that fundamentally advance Australia's non-medical/health priorities, including the national science and research priorities.^{16,17} It would also incentivise a wider range of disciplines that are increasingly important for Australia's future – including in the humanities and social sciences and especially those aimed at social impact – to bring their ideas to the broader community in innovative ways, beyond the standard approach of disseminating research through publications and patents.

15 See, for instance, Priority Directions 2: Three essentials for future economic success <https://go8.edu.au/go8-publication-priority-directions-2>

16 The National Science and Research Priorities are currently being refreshed through a process led by Australia's Chief scientist.

17 See also the UNSW Sydney submission to the review of Australian Government Funding Arrangements for non-NHMRC Research.

Bold ideas to implement a seamless tertiary education system

Funding would be available to universities – and potentially to other research providers – on a competitive basis to support both project-based, and strategic mission-based research and all funding would come with full economic costing.

However, it is also important to place the role of this fund into the broader context of a national research system. The most socially and economically impactful research is grounded in outstanding discovery-led research. As we argued above, Australia is currently under-investing in basic research and universities are increasingly being asked to make up the difference.

This is clearly unsustainable, as the data makes clear. The cost to under-funding basic research will be paid by less impactful research in future and greater reliance on non-Australian providers, which will undermine our sovereign capabilities and national resilience.

National Strategic Research Block Grants to support core research

In 2023 the Australian Government provided \$2.079 billion in research grant funding 42 Higher Education Providers including:

- \$1.112 billion through the Research Training Program – RTP (of which the Go8 received \$657 million or 59 per cent); and
- \$968 million through the Research Support Program – RSP (of which the Go8 received \$652 million or 67 per cent).

The RSP is intended to support the systemic costs of research including to *provide a flexible funding stream to support the systemic costs of research, including the indirect costs of Australian competitive grant research.*¹⁸

18 Other Grants Guidelines (Research) 2017 <https://www.legislation.gov.au/Details/F2023C00029>

However, as noted earlier in the section on Full Economic Costing, in order to undertake ARC, NHMRC, and MRFF research (all examples of Australian competitive grant research) universities are required to provide significant cross-subsidies beyond the RSP.

The other objectives of the RSP are to support the delivery of world class research more generally and to support collaboration between higher education providers and other research end users.¹⁹

With RSP funding utilised to support ARC, NHMRC, and MRFF research, there is essentially no capacity from the RSP funding stream to support these broader and potentially strategic research activities.

The introduction of full economic costing enables a reimagining of the research block grants where freed from supporting indirect costs of research, they can be used to fund core research activity – both in support

of the underlying basic research capability of Australian universities and strategic research capability under the National Research Strategy.

As part of moving to a more diverse research system, with greater differentiation between institutions based on their ability to contribute to the overall excellence of the system, the Go8 believes there should be national strategic research block grants allocated to newly constituted Federal research-intensive universities.

These universities would then also be expected to support research in other universities through a hub and spokes model. This might include access to research infrastructure, research training, research support, and other resources. Similarly, there could be targeted block funding for research focused on specific disciplinary areas at institutions with demonstrated strengths in those areas, or with particular research missions given their geographic location or capabilities.

¹⁹ Ibid.

Bold ideas to implement a seamless tertiary education system

Introduction of national Doctoral Training Centres

A well-trained research workforce is critical to Australia's economic, technological and cultural strengths and its contribution to knowledge and prosperity locally and internationally. The nation requires creative and sustainable pathways to harness the intellectual talent needed to transform Australia. Graduate training is a key mechanism to build a knowledge economy.

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Although many PhD graduates remain in universities immediately after the completion of their degrees, only a small fraction remain in the university research system long-term. This is what some have dubbed the 'Leaky Pipeline' in academia, a rather deficiency-based viewpoint, predicated on the view that PhDs are only suitable for academic employment.

But this is short-sighted. Rather, the purpose of research training is much broader and has much greater potential for a broader role in the private and public sector. A highly trained research workforce will increasingly become a vital aspect of Australia's future economy and of benefit across a wide array of domains (i.e., business, government, public business enterprises, not-for-profit organisations, NGOs, community organisations).^{20,21}

20 McGagh J, Marsh H, Western M, et al. Research training system review. 2016. <https://acola.org/research-training-system-review-saf13/>

21 Vitae. Researcher training – Vitae Website. Vitae, Realis. potential Res. 2020. <https://www.vitae.ac.uk/researcher-training>

Graduate researchers have the capabilities required to help Australia meet the productivity challenge. The Committee for Economic Development of Australia (CEDA) report, 'Australia's future workforce?' released in June 2015 provides an insight into the types of capabilities that will be needed to meet future challenges as does the National Skills Commission (now Jobs and Skills Australia) report, 'The State of Australia's Skills 2021: now and into the future'.^{22,23}

In addition to cutting-edge technical skills and content knowledge, PhD graduates come with the transferable skills/attributes of problem solving, deep discipline knowledge and expertise, adaptability, persistence, and the ability to work independently, creatively, and innovatively.

To ensure Australia can capitalise on this critical workforce, the Go8 recommends a centrally coordinated

approach of specialisation in graduate researcher training, one that identifies which graduate capability areas can be met within institutions, and which need to be addressed by universities collaborating, so they can pool existing capabilities to support PhD training.

The Go8 also recommends the creation of national doctoral training centres that align with all sectors of Australian economy and society and in areas of national priority.

These centres could leverage existing expertise within various universities and from across the private and public sector to provide critical mass and the necessary infrastructure for a high-quality student experience. Existing schemes such as the National Industry PhD program could be aligned with these centres and industry invited to partner with them in a range of ways.

22 Committee for Economic Development of Australia (CEDA). CEDA – Australia's future workforce? 2015. <https://www.ceda.com.au/Research-and-policy/All-CEDA-research/Research-catalogue/Australia-s-future-workforce>

23 National Skills Commission. The State of Australia's Skills 2021: now and into the future. <https://www.nationalskillscommission.gov.au/reports/state-of-australia-skills-2021>

Bold ideas to implement a seamless tertiary education system

Education

Implementation of Lifelong Learning

The line between the years of learning and the years of earning has become increasingly blurred over time. Unlike previous generations who may have secured a decent paying job upon completing year 10, it is not enough for current students to attend the compulsory years of secondary schooling to secure and maintain a well-paid job in today's economy.

Similarly, as current Australian workers shift their careers and adapt to new technologies, ongoing education will be necessary to acquire new skills and training. Lifelong learning is no longer a platitude, but a living reality. All Australians will continue to require access to a high-quality tertiary education in order fully participate and benefit equitably from the changing economy.

Australia is in urgent need of a lifelong learning system that will enable all Australians greater access and opportunity to benefit from a high-quality tertiary education. Such a system would also allow the nation to better meet future workforce needs, as well as meet the cultural and social aspirations of the population.

A universal learning entitlement to post-compulsory education and training and the introduction of a Lifelong Learning Account to track credit and verify learning, would provide the opportunity for all Australians, regardless of background, to learn, train and re-skill as their needs and circumstances change throughout life.

Lifelong learning is currently stymied by the absence of an integrated system of recognised prior learning and experience framework, as well as barriers such as cost and time.

Lifelong learning is no longer a platitude, but a living reality.

By taking advantage of the Unique Student Identifier already in place, a lifelong learning system should seek to remove the barriers of moving in and out of tertiary education and make it easier for learners to navigate the education suited to their needs and interests.

The lifelong learning system would also need to be flexible enough to respond to changes in workforce demand as they arise; while also embedding individual flexibility for people to skill and reskill as necessarily throughout their career.

There may also be options for a variety of funding models. For example, high employer demand for particular skills could lend itself to options for commercial funding, including companies funding additional places in areas of high demand such as cyber security.

Supporting excellence in teaching and research

Universities have traditionally performed three key functions within Australian society:

- Educating the community in advanced knowledge.
- Conducting research to advance the frontier of knowledge and discovering its applications.
- Community service through outreach and engagement.

In 2004 the proportion of people aged 20–64 years with a bachelor degree or above was around 21 per cent. By 2020 this had grown to 34.6 per cent.²⁴ ABS data from May 2022 shows that 63 per cent of people aged 15–74 years now have a non-school qualification.²⁵

²⁴ ABS, Education and Work, Australia, 2020, <https://www.abs.gov.au/statistics/people/education/education-and-work-australia/may-2020#data-downloads>

²⁵ <https://www.abs.gov.au/statistics/people/education/education-and-work-australia/latest-release#qualifications-held>

Bold ideas to implement a seamless tertiary education system

This is in stark contrast to social trends when Australia's first university, The University of Sydney, was established in 1850, when the global literacy rate was just 10 per cent.²⁶

While it may have made sense in the past to create a network of like institutions providing all three of these functions – when there was a smaller cohort of services and industries requiring those with higher education qualifications – the world has changed significantly in recent years.

As the world continues its rapid transition from traditional economic bases to being more knowledge and innovation driven, coupled with the drive towards automation and artificial intelligence, more industries

across more areas will require workers with access to the knowledge and education needed to operate in this fast-changing world.

Anyone who doubts this trend need only look at the field of cyber security, where demand for skilled workers well exceeds current supply. As noted in the Accord discussion paper: *“Meeting the demand for jobs, skills and talent will require Australia to lift the number of people with higher levels of knowledge and skills dramatically”*.²⁷

Australia must now ask the question: do we still require (and can we still afford) a university model in which all institutions are required to conduct comprehensively all three functions of teaching, research and outreach – in particular teaching and research?

²⁶ <https://theconversation.com/national-press-club-address-ian-jacobs-on-universities-australias-hidden-asset-101517>

²⁷ Accord Discussion Paper, <https://www.education.gov.au/australian-universities-accord/resources/australian-universities-accord-panel-discussion-paper>

In alignment with Go8 Premise 1 it is critical that Australia notes the interdependency of research and education and maintains a strong footprint in research informed teaching – to train Australia’s future innovators and provide pathways for future researchers to operate at the cutting edge of knowledge. This will drive Australia’s future economic growth and allow Australia to remain an active part of international research and innovation.

However, also in alignment with Premise 1, Australia must acknowledge the distinct nature of the education and research missions, and recognise that not all higher education must be delivered in a directly research informed environment.

What is essential is that these missions in education and research are supported in a way that recognises the context in which they are delivered and to achieve excellence in all cases.

Australia must now ask the question: do we still require (and can we still afford) a university model in which all institutions are required to conduct comprehensively all three functions of teaching, research and outreach – in particular teaching and research?

Bold ideas to implement a seamless tertiary education system

Staged implementation of a flat-fee model for students in higher education

High quality education, from early learning through to tertiary education, is important for productivity growth and to meet Australia's workforce needs. The Productivity Commission notes that in the next five years, more than nine out of 10 jobs will require tertiary education, while six of every 10 new jobs will be high skilled. This trend is expected to continue over the 30-year horizon, including prevalence of jobs requiring non-routine skills, as well as adaptable, more general capabilities.

The Productivity Commission notes that in the next five years, more than nine out of 10 jobs will require tertiary education, while six of every 10 new jobs will be high skilled.

A long-term seamless Tertiary Education System will require a sustainable teaching funding model to provide for participation growth in tertiary education.

More immediately, the Accord must address the limitations of the current funding system, including specifically for higher education:

- There has been a decline in government per student funding for Commonwealth Supported Places.
- There has been a reduction in the capacity for undergraduate funding to cover base research funding through the Commonwealth Grant Scheme (CGS).
- It can be shown that the Job-ready Graduates (JRG) changes to relative Commonwealth and student contributions have created perverse enrolment incentives, particularly in relation to STEM related courses where there will be funding losses.

The Go8 recommends the immediate abolition of the JRG package in favour of a staged implementation of a simpler model for university teaching funding, one that provides a greater level of fairness for students.

The funding model involves having a single student contribution irrespective of qualification and a Commonwealth contribution to reflect the variability of the given qualification cost. A limited number of exceptions could continue under this proposed funding model, for example, medicine, where the number of Commonwealth supported places is currently capped.

Under this proposed funding model, graduates from courses that lead to higher private financial benefit will be progressively taxed by the income tax system as they enter the workforce. Other graduates may accrue private benefits that might not be financial – that is where Australia’s income contingent loan (ICL) system is important.

The staged approach will involve identifying the variability and **full costs** of a given qualification, noting that costs can vary even between degrees that on face value are considered homogenous. This does **not** mean accepting the existing cost estimates collected by the Department of Education that do not comprehensively capture indirect and ‘joint costs’.

Nor does it mean accepting a unique efficient price for the delivery of a given course. All courses and degrees are not identical so an efficient price for teaching is a theoretical concept. There is potentially a ‘curve’ of efficiency versus quality that is complex.

Therefore, an important component is to have a better teaching cost exercise to inform the Commonwealth contribution.

The funding model involves having a single student contribution irrespective of qualification and a Commonwealth contribution to reflect the variability of the given qualification cost.

Bold ideas to implement a seamless tertiary education system

Breaking the reliance on international student funding

At present the Australian higher education system relies heavily on international student fee revenue to fill funding gaps within the system (such as for high quality research). This has the potential to compromise the quality of the Australian university system in a number of ways, for example:

- It drives pressure to enrol increasing numbers of international students.
- It increases vulnerability to external events that might impact international markets (i.e., COVID).
- It outsources Australia's sovereign capability building potential to external forces and international markets.

International students make a vital contribution to Australia's and the region's well-being on multiple levels. The framing of international education in purely commodity terms also makes us vulnerable in other ways. At a time when soft power, driven by deep and lasting partnerships, is becoming essential to ongoing Indo-Pacific stability and social cohesion, and education is perceived by many of our regional neighbours as the key to the goals of social and civic development, a purely economic narrative is self-defeating.

The capacity to advance sovereign capability and to participate in the growing intellectual trade routes of the future rests on the foundation of high-quality research. Failure to fund this research effort appropriately makes Australia's ongoing prosperity

vulnerable to changes in the international student market, and there are already signs that shifts are underway. International higher education enrolments over the past 10 years (2013–2022) reveal two key shifts:

- Away from traditional undergraduate delivery towards post-graduate.
- Source countries shifting away from the global north and towards the global south.

If Australia fails to reframe our international education sector to adapt to these changes, then we will be undermining our own future sovereign capability and prosperity and failing to capitalise on the significant soft power potential of our high achieving, high performing universities.

We will also miss the opportunity to better connect education and research activities with trade and foreign relations activities through scholarship, training, mobility, and research funding programs. These need to be prioritised to create scale.

International education also provides Australian students with opportunities to build knowledge of – and networks in – our region. We must equip our own students at all levels with the exposure and skills they need to compete in global settings.

Finally, and importantly, if we do not reform international education, then we will not be living up to Australia’s responsibilities as a significant democratic and wealthy middle power to act as a global citizen in building capability in our region and more broadly.

Bold ideas to implement a seamless tertiary education system

Population growth trends

The chart extracted from the United Nations *World Population Prospects 2022* report (Figure I.3) shows the world's ten most populous countries, including to 2050 for the 'medium scenario' (population is given in millions).

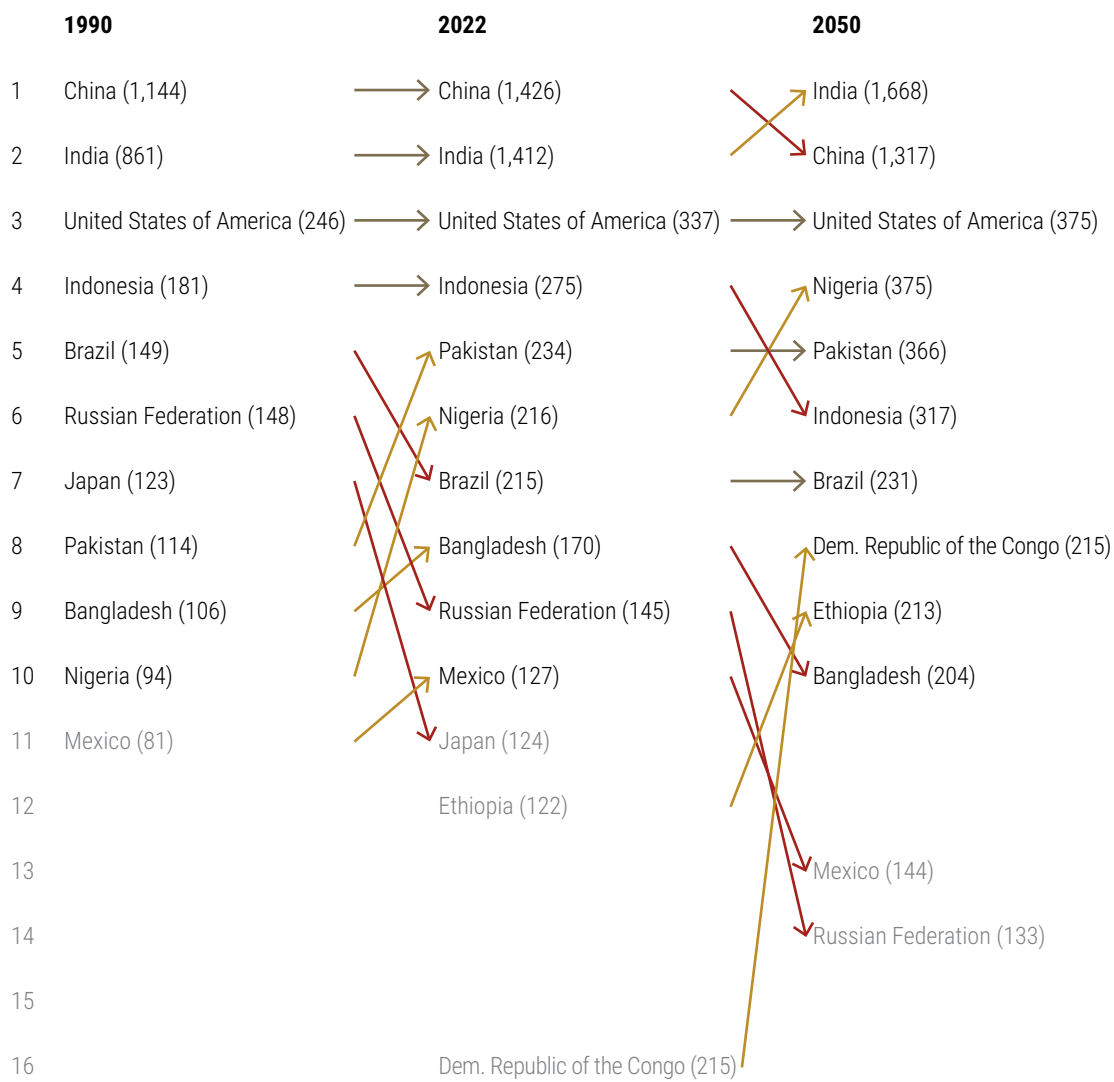
Global population growth is slowing and compositionally there is ageing, with the old age dependency ratio a constraint on economic growth in Australia. In addition, across the world, centres of population mass will likely shift in the next 30 years.

These population changes potentially mean lower economic growth and the risk of overdependence by Australia on several key export markets.

The composition of nations from which international students come from will also likely change and there will be potentially greater global international competition in education services.

The ageing of the population is also likely to further tilt demand for education and qualifications towards "human services".

Source: United Nations Department of Economic and Social Affairs, Population Division (2022). *World Population Prospects 2022: Summary of Results*. UN DESA/POP/2022/TR/NO. 3.



Bold ideas to implement a seamless tertiary education system

A National Tertiary Education System Fund

To pursue and achieve a seamless **Tertiary Education and Research System** and enhance long-term funding certainty, the Go8 recommends the Australian Government establish a **National Tertiary Education System Fund** that operates with an independent board supported under the proposed Tertiary Education Commission.

The core purpose of the Fund would be to provide strategic investment in our tertiary education system (including operational and infrastructure grants).

A bi-partisan expert advisory board would be established to advise the Minister for Education on the relative merits of funding, in line with the mandated purpose and scope of the Fund, while the Future Fund Board of Guardians should be given responsibility for the administration and management of the Fund.

Australian governments of both political persuasions have, in the past, had the foresight to establish higher education related funds, only for these funds to be dissolved because of budgetary pressures, or amalgamated into much broader funds, diluting the focus on their original intended purposes. Hence a new National Tertiary Education System Fund would need genuine bi-partisan commitment that the Future Fund currently receives to ensure its longevity.

A bi-partisan expert advisory board would be established to advise the Minister for Education on the relative merits of funding, in line with the mandated purpose and scope of the Fund ...

Previous dedicated funds that no longer exist but may serve as a successful model for the National Tertiary Education System Fund include the (then “perpetual”) Higher Education Endowment Fund (HEEF) starting with \$5 billion seed funding from the 2006–07 Budget surplus, and the Education Investment Fund (EIF) that was subsequently closed in December 2019 with a remaining balance of around \$4 billion.

The Go8 recognises the primacy of the annual Budget process to allocate public resources, including for higher education, but this also motivates our call for a dedicated fund – to quarantine investment in our tertiary education system from the year-to-year fluctuations and demands in the annual budget cycle. We believe this was part of the intent of previous Labor and Coalition governments when they created the EIF and HEEF, respectively.

The Go8 recognises the primacy of the annual Budget process to allocate public resources, including for higher education, but this also motivates our call for a dedicated fund – to quarantine investment in our tertiary education system from the year-to-year fluctuations and demands in the annual budget cycle.

Bold ideas to implement a seamless tertiary education system

Equity

Redesign of post-secondary education as a seamless tertiary education system supporting equity

The Go8 recommends that the tertiary higher education and vocational training systems be redesigned to form an integrated training and higher education sector oriented to lifelong learning. This sector should incorporate flexible pathways between vocational training and higher education **in both directions** and at various qualification levels.

An integrated tertiary sector ... could support improved outcomes for equity students by providing better access and opportunities to those from disadvantaged backgrounds.

This new sector should be supported by a redesigned upper-secondary education and have appropriately supported academic and vocational tracks/pathways.

An integrated tertiary sector would have several advantages over the current system. It could support improved outcomes for equity students by providing better access and opportunities to those from disadvantaged backgrounds. Benefits include:

1. Pathways with more flexibility provide “multiple chance” opportunities to enter or re-enter education and training at various points, and alternative entry points to draw new entrants into the system. This flexibility will be necessary if Australia is to meet new tertiary education attainment targets.

-
2. It is better suited to equipping students with both advanced-level academic knowledge and skills, and with vocationally oriented and applied knowledge and skills.
 3. With lifetime learning and appropriate pathways it allows students to upgrade and acquire new skills throughout their working lives, better equipping them for changing skills demand, and occupational and industrial restructuring. Two-way pathways enable academic and vocational upgrading and sideways transitions.
 4. Proper system redesign would incentivise better collaboration between governments, industry partners, providers and relevant communities and is likely to result in a more efficient use of resources with smaller transaction costs and fewer adverse unintended consequences.

Targeted, long-term, collaborative solutions and focused strategies that work across all levels of government to address impediments and barriers to equity in education

It is important to acknowledge that the differences we see in student access, participation, and success in tertiary education, particularly higher education, are the downstream product of processes that are set in place from birth and exacerbated throughout schooling. There is a long pathway into university and a systems approach to equity which can capture the cumulative and compounding effects of disadvantage is necessary if we are ever to improve outcomes. Inequity in education will never be solved by merely tinkering at the edges.

Consideration should be given to a holistic suite of policy changes designed to set all students up for success, including before they reach university, while they attend university, and after they complete their degrees.

Bold ideas to implement a seamless tertiary education system

This will require coordination across all levels of government and education stakeholders. For example, Federal and state/territory Government departments and agencies, along with community service organisations, local communities, the philanthropic and charitable sectors, industries, business, trade unions, and universities should create targeted, long-term strategies to address systemic barriers to participation, success, and employment that universities and the Department of Education alone cannot solve.

As a first step, and as the Go8 has recommended previously in our submission to the Productivity Commission inquiry, the Government should work with universities on the appropriate level of funding per student required to support progress towards equity and gender representation targets.

Similarly, the Government should also consider updating the current system of financial support available to students during study to remove material barriers and ensure the benefits of a quality education and lifelong learning can be shared by all.

... the Government should work with universities on the appropriate level of funding per student required to support progress towards equity and gender representation targets.

**Justice
Michael Lundberg
- University of
Western Australia**

Justice Michael Lundberg has a Bachelor of Commerce and Laws, 1993 from the University of Western Australia.



Michael Lundberg is the son of the Stolen Generations. He grew up in Port Hedland and in September 2022, he was appointed the first Indigenous Supreme Court judge in Western Australia.

In his UWA Graduation Guest Address, Michael said that when he graduated, he felt a ‘remarkable sense of opportunity’ ... **‘your connection with this university will always remain’**. A core component of his speech was acknowledging the ‘gift’ of the education and the importance of using it wisely.

“Your journey has no doubt had its special challenges and, like those from other minority groups, you will bear an additional burden in your career – a burden which comes with a spotlight on your conduct and your achievements. It’s finding places within the legal community that may not be traditional but where Indigenous people can actually make a difference from the inside. With more Aboriginal people coming into the legal profession, I can see gains for the longer term if more Aboriginal lawyers look beyond those traditional spaces.”

Bold ideas to implement a seamless tertiary education system

A National Equity Data/Evidence Institute

The targeted, long-term solutions and focused strategies developed to ensure equity of access and success, which will be implemented across Government agencies, the tertiary sector and individual tertiary institutions **must be research and data driven**. We must know what works, what hasn't worked and why, if we are to evolve our tertiary system and maximise access across the population.

It is data and data systems that will help the sector know what success looks like, track progress and measure it.

The Go8 recommends the creation of **a new national agency or network of research centres and institutes to drive a data driven approach to equity and excellence in the tertiary sector**.

This agency would bring together, in a single or federated structure, the research and evidence remits of the Australian Education Research Organisation (AERO), the National Centre for Vocational Educational Research (NCVER) and the National Centre for Student Equity in Higher Education (NCSEHE). A core part of the Agency's research agenda could be enabled by developing an advanced data capability (a National Education Evidence Database) built from integrated public sector data assets, including provider data. It is data and data systems that will help the sector know what success looks like, track progress and measure it.

A National Equity Data/Evidence Institute would enable tertiary education providers to understand where and how they can have the most impact, and, in collaboration with Government, industry, communities and other sectors create mission-relevant targets. The agency would also be responsible for generating and making accessible, the evidence base that will allow students to make informed educational choices about courses, programs, and providers.



Australia's new National Equity Data/Evidence Institute should have a remit to undertake or enable:




- Applied research to generate an evidence base for policy and practice.
- Evidence about what works, for whom, and under what circumstances (i.e., policy and program solutions) to promote excellence and equity in tertiary education.

The agency could also be responsible for providing **independent long term and strategic advice to the proposed Tertiary Education Commission** about Australian tertiary education and for supporting national evaluation and monitoring against high level strategic outcomes and impact targets.

A National Equity Data/Evidence Institute would enable tertiary education providers to understand where and how they can have the most impact, and, in collaboration with Government, industry, communities and other sectors create mission-relevant targets.

Appendix 1: Global trends and implications for Australia

Factor	Global Trends	Implications
 <p>Demographics</p>	<ul style="list-style-type: none"> • Population growth slowing and ageing • Old age dependency ratio a constraint on economic growth • Further urbanisation • Centres of population mass will likely shift 	<ul style="list-style-type: none"> • Potentially lower global economic growth overall • Risk of overdependence on China for exports (mining, education) • Diversification and global competition for international students • Further tilt towards demand for qualifications in “human services”
 <p>Economy</p>	<ul style="list-style-type: none"> • Knowledge creation and diffusion key to per capita economic growth • Asia still centre of growth (beyond China, India, and Indonesia) • Services sector dominating economic activity and employment 	<ul style="list-style-type: none"> • Productivity is crucial for prosperity • Research creates knowledge and this matters for productivity! Globally: <p>Economic growth = Research productivity x Number of researchers</p> <ul style="list-style-type: none"> • Global knowledge diffusion and competition (e.g. computer chips) • Further engagement with Asia critical • Services sector productivity needed

Factor	Global Trends	Implications
 <p>Technology</p>	<ul style="list-style-type: none"> • Skill biased technological change • New “intelligent” technologies – AI, quantum computing, nanotechnology • Further drift to online (education) services and presence 	<ul style="list-style-type: none"> • Demand for higher skill level graduates to continue • New technologies: Automation (replacing people) vs Augmentation (assisting people) – too early to tell • Lifelong learning – new skills and/or retrain for new tasks that AI creates • Re-examine value proposition of “bricks and mortar” education
 <p>Environment</p>	<ul style="list-style-type: none"> • Climate change shifting population, economic activity, and geopolitical relations • Environmental risks to prosperity and well-being • Mix of environmental risks and public health implications 	<ul style="list-style-type: none"> • Global research challenge – to create the knowledge and technologies to address environmental risks • Need more tertiary education/industry/ international collaboration • Role for Australia to lead in environmental solutions for local Asia Pacific region
 <p>Government</p>	<ul style="list-style-type: none"> • Fiscally constrained – spending pressures constant while revenue variable • Trend in many advanced economies towards private (co)funding of education, health, retirement • Public spending on tertiary education varies widely across economies (but so does private) 	<ul style="list-style-type: none"> • Competition for public funds • Pressure for private co-funding (student fees) to grow • Continual need to show/prove value for taxpayer money in spending • With public funding envelopes tight, potentially need to diversify funding sources for education – philanthropy, industry funding, etc. but these are not fool proof

Appendix 2:

Experts contributing to the Go8 submission

At the direction of the Go8 Board, the Go8 Directorate convened three high-level working groups to focus on priority areas of research, education, and equity, respectively.

The Go8 Board also approved an overarching working group to synthesise the output of the working groups and provide overall direction for the Go8 submission.

These working groups comprise leading Go8 experts with a variety of backgrounds in order to provide the range of input required for a whole of sector future vision of higher education and tertiary education more broadly.

Go8 Overarching Working Group Membership

Name	Position	University
Professor Brian Schmidt AC – Chair	Go8 Chair, Vice-Chancellor and President	Australian National University
Professor Margaret Gardner AC	President and Vice-Chancellor	Monash University
Professor Duncan Ivison – Chair Go8 Accord Research Working Group	Professor of Political Philosophy	University of Sydney
Professor Nicola Phillips	Provost	University of Melbourne
Professor Michael Wesley – Chair Go8 Accord Education Working Group	Deputy Vice-Chancellor International	University of Melbourne
Professor Mark Western – Chair Go8 Accord Equity Working Group	Director of the Institute for Social Science Research	University of Queensland
Scientia Professor George Williams AO	Deputy Vice-Chancellor Planning and Assurance	UNSW Sydney

Appendix 2: Experts contributing to the Go8 submission

Go8 Research Working Group

Name	Position	University
Professor Duncan Ivison – Chair	Professor of Political Philosophy	University of Sydney
Professor Mark Blows	Deputy Vice-Chancellor (Research and Innovation)	University of Queensland
Professor Rebekah Brown	Deputy Vice-Chancellor (Research) and Senior Vice-President	Monash University
Professor Kevin Fox	Go8 Economics Advisory Group, Director, Centre for Applied Economic Research (CAER)	UNSW Sydney
Professor Jane Gunn	Dean of the Faculty of Medicine, Dentistry and Health Sciences (MDHS)	University of Melbourne
Professor Emma Johnston AO	Deputy Vice Chancellor Research	University of Sydney
Professor Dane McCamey	Acting Pro-Vice Chancellor Research	UNSW Sydney
Professor Anton Middelberg	Deputy Vice-Chancellor (Research)	University of Adelaide
Dr Dean Moss	CEO UniQuest	University of Queensland
Professor Anna Nowak	Deputy Vice-Chancellor (Research)	University of Western Australia
Professor Moira O’Bryan	Dean of the Faculty of Science	University of Melbourne

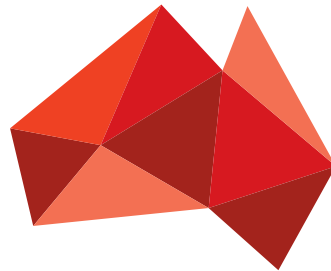
Go8 Education Working Group

Name	Position	University
Professor Michael Wesley – Chair	Deputy Vice-Chancellor International	University of Melbourne
Wayne Andrews	Chief Financial Officer	University of Sydney
Professor Merlin Crossley	Deputy Vice-Chancellor (Academic)	UNSW Sydney
Dr Gwilym Croucher	Associate Professor in the Melbourne Centre for the Study of Higher Education	University of Melbourne
Dr Jessica Gallagher	Deputy Vice-Chancellor (External Engagement)	University of Adelaide
Dr Clare Hourigan	Director, Planning and Business Intelligence	University of Queensland
Rongyu Li	Deputy Vice-Chancellor (Global Engagement)	University of Queensland
Professor Abigail Payne	Go8 Economics Advisory Group, Melbourne Institute of Applied Economic and Social Research	University of Melbourne
Tim Payne	Director Higher Education Policy and Projects	University of Sydney
Professor David Sadler	Deputy Vice-Chancellor (Education)	University of Western Australia
Professor Grady Venville	Deputy Vice-Chancellor (Academic)	Australian National University

Appendix 2: Experts contributing to the Go8 submission

Go8 Equity Working Group

Name	Position	University
Professor Mark Western – Chair	Professor of Sociology Founding Director of the Institute for Social Science Research	University of Queensland
Kristen Andrews	Vice-Principal (External Relations)	University of Sydney
Professor Eileen Baldry AO	Professor of Criminology	UNSW Sydney
Associate Professor Paul Harpur	UQ Law School	University of Queensland
Professor Marcia Langton	Associate Provost	University of Melbourne
Dan McHolm	Chief Data & Analytics Officer	University of Adelaide
David Norman	Senior Policy Advisor to the Vice Chancellor	University of Western Australia
Professor Sharon Pickering	Deputy Vice-Chancellor (Education) and Senior Vice-President	Monash University
Professor David Sadler	Deputy Vice-Chancellor (Education)	University of Western Australia
Associate Professor Bruce Watson	Deputy Vice-Chancellor (Equity, Diversity and Inclusion)	UNSW Sydney



GROUP OF EIGHT AUSTRALIA

MEMBERS



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MONASH
University



Australian
National
University



THE UNIVERSITY
of **ADELAIDE**



THE UNIVERSITY OF
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