



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

University Sector Review

Western Australian public universities

UWA Submission
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Acknowledgement of Country

The University of Western Australia acknowledges the traditional owners and custodians throughout Western Australia and we pay our respects to Elders past and present.

The University of Western Australia acknowledges that its campuses are situated on Noongar lands, and that Noongar people remain the spiritual and cultural custodians of their lands, and continue to practise their values, languages, beliefs and knowledge.

Vice-Chancellor's foreword

The University of Western Australia (UWA) welcomes the State Government's focus in this University Sector Review on supporting and strengthening WA's higher education sector, to underpin the State's strong future.

UWA was established by the Western Australian Parliament with a founding mission to advance the prosperity and welfare of the people through the University of Western Australia Act in 1911. We remain committed to this noble mission through our teaching, research, scholarship and knowledge translation for the benefit of the State and remain confident in our ability to deliver on this under our current structure, while acknowledging this may be enhanced through structural changes across WA's public universities.

It is fundamental to the State's success that we continue to have a globally positioned research-led university within WA, while providing a system which empowers diversity in thought, diversity in offerings and diversity in delivery; enabling choice for our current and future students, staff and community.

As WA's first university, UWA has emerged as a global university leading in advancing knowledge in many disciplines, including proving Einstein's Theory of Relativity through the Wallal Expedition, led by Professor Ford in 1922 and the discovery of gastric ulcer-causing bacteria and its treatment by Professors Barry Marshall and Robin Warren earning them a Nobel Prize in 2005. As WA's leading research university, UWA shares the Government's concern about the State's declining share of national research funding.

UWA welcomes the State Government's renewed interest in its public universities. We support its objectives and aspirations of optimising public university contributions and performance to grow to be among the best in the world. We remain open to any structural change that can strengthen and enhance the sector's ability to better serve our State's needs.

Across the State, our public universities have a significant opportunity to work together, with the State Government and the wider WA community and industry, as 'Team WA'. With courage,

boldness and innovation we can further shape change appropriate to the challenges of economic diversification, technological change and automation and ensure increased impact and value to our State.

Working together, we can better address equity of access to tertiary education from non-traditional student groups. We can further design and deliver attractive and viable educational opportunities with the diversity and scale that fit our State's unique geography, population, and future economic ambitions. We can consider ways to facilitate the mutually supportive partnerships we share with medical research institutes, State Government departments, businesses, industry as well as the school and vocational education sectors.

The University looks forward to ongoing engagement with the Panel as it progresses the review process.

Vice-Chancellor

Professor Amit Chakma

Executive summary

For the WA State economy to continue to thrive and diversify it must remain innovative and ensure creativity is embedded within its current and future industries which underpin a contemporary economy. Advancements in key industries such as health, agriculture, future resources, renewable energies, quantum computing, artificial intelligence (AI) and defence will sustain our economy and growing population. A research-intensive, world-ranked university in WA is essential for the cutting-edge research that supports industrial innovation and creativity through research translation.

The State also needs the university system to provide the skilled workforce for the future. A world-class, research-intensive university creates opportunities and experiences for its students to become future leaders locally, nationally and globally.

To support the success of the State, UWA acknowledges that there is merit in some structural change across the public university sector. We also reflect that there may not be a single solution that accomplishes all that is needed, and there may be benefit in considering **aspects across several structural models** as they best serve each objective.

Structural change across WA public universities may enable a better foundation for success and a springboard for **meaningful change** to occur in fulfilling the States objectives. It will require **targeted investment** to fully realise the opportunities of change. The financial model of public universities in Australia is heavily based on student income. WA needs more students to sustain the financial model and support the State economy. Currently, domestic enrolment growth at one institution largely comes at the expense of others. This competition for students creates an environment where cooperation and collaboration can present challenges.

UWA considers that structural change must also continue to **enable differential offerings** in our system, acknowledging that the community we serve, including our students, domestic and international, has diverse needs and expectations. Ensuring international students, for example, have choice through coordinated tiered offerings for our high-volume courses, including a top-100 'research intensive' option, a mid-tier and a teaching-focused university – with relevant price-points – would attract more international students to WA. Differential offerings recognise the differing requirements of learners at varying stages of life and socio-economic contexts, and rightly embrace multiple pathways to provide accessibility for the whole State.

Any future model(s) must consider proximity to students, industry and access for non-traditional cohorts. **Teaching strategies** that address the needs of regional learners, as well as non-traditional cohorts will support improved access to education and student success. While tiered offerings are crucial to the needs of diverse student cohorts in WA, the aspirations for university study for students from non-traditional backgrounds should be met through the choice of all types of higher education, including that provided by a research-intensive university. Contemporary student experiences of campus life should consider both physical location and digital integration.

Efficiencies of scale could be achieved through models such as coordination (consortia and federation) and merger through amalgamation of whole or part of operations. These models could reduce competition for infrastructure funding, duplication of equipment, streamline access and improve collaborative opportunities. Additionally, these could simplify engagement for industry and help build specialised platform expertise in operating and maintaining equipment and facilities and in developing novel applications and innovative approaches. However, we note the benefits of institutions retaining a high degree of autonomy as accredited institutions, including over teaching quality and research priorities.

Higher education in WA would benefit from **greater coordination between universities and partnerships with the Vocational Education and Training (VET) sector, schools, government departments, professions and industry**. One way to achieve this could be through a 'Regional Education' body that coordinates and optimises the use of assets which are fit-for-purpose to deliver training needs, aligned to skills and workforce requirements.

Cultural alignment will be fundamental to success in any proposed structural change.

A structure which retains stability, identity and job security would reduce the risk of WA losing key expertise and knowledge. A federated or consortium model in which institutions retained a high degree of autonomy over the research and education vision and priorities while benefiting from shared infrastructure and resources would have the most positive impact on culture and staff morale. By improving systems and infrastructure access, such a model could attract and retain high quality academic staff.

UWA is committed to working constructively towards the best outcomes for the State and the people of Western Australia, and a continued strong future for the university sector.

Context

In considering the questions proposed by the Panel, UWA has reflected on both the unique WA context and some of the key drivers influencing the sector, including:

1. WA size and population

Western Australia is the largest Australian state by landmass with an estimated population in 2021 of 2.8 million, of whom 2.2 million were aged 17 or above¹. From this population, there were 110,993 domestic students in WA in 2021, spread across the five universities². These small numbers result in a very competitive market for WA universities seeking to grow their domestic student base.

Recognising that each university has a unique offering, structural change could be beneficial to both students and institutions in creating opportunities to increase student numbers in WA public universities.

2. Different career aspirations and interests of students

Maintaining differential education offerings is critical in any structural model to serve the diversity of student choices and needs, both for domestic and international students. Providing tiered choices is particularly important to meet the requirements of the international student market. System design must consider a degree of differentiated institutional expertise, disciplines and modes of delivery. This could be further expanded to dual sector (with VET) options. It is important that equity of access is considered in any model.

3. State financial sustainability and economic benefit

Universities contribute to the State's financial sustainability and economic benefit by providing workforce development, conducting research and innovation, fostering entrepreneurship, engaging with local communities, attracting international students and visitors and by direct economic impact as employers and consumers of goods and services. By leveraging our unique strengths and capabilities, universities can help create a thriving, innovative, and sustainable economy.

¹ [*Australian Bureau of Statistics - National, State and Territory population Sept 2022*](#)

² [*Department of Education - Student Enrolment Time Series 2021*](#)

4. Sovereign capabilities and social impact

Universities can provide sovereign capabilities and social impact through research and innovation, providing education and training, engaging with local communities and contributing to policy development. These activities are essential to build a resilient state that is best equipped to address the complex challenges of the 21st century. UWA alumni and researchers have contributed to significant economic, social and research developments in our State and beyond, and are committed to continuing to build on this legacy. We recognise opportunities to further extend our contribution through the next generation of graduates by attracting top-tier academics and by further developing our existing world-class medical and research institutes and facilities.

5. State and national research priorities and research excellence

It is imperative for our State to have a world-class, highly ranked research-intensive university. The WA State Government has released several strategic priority discussion papers over the past five years which shape our State and have been considered in this document.

The State also has world recognised academic talent and research capabilities, highlighted by the performance of our research areas within the Academic Ranking of World Universities ([ARWU](#)). Within the State we have 13 subject areas in the Top 50 Universities globally, of which UWA represents 10. UWA has particular strengths in Agricultural Sciences, Biological Sciences, Clinical Medicine, Ecology, Environmental Science & Engineering, Human Biological Sciences, Marine & Ocean Engineering, Mining & Mineral Engineering, Oceanography and Water Resources. As a sector we should aim to retain and build on these strengths.

6. National collaboration and competition

WA needs a state university system which can compete in scale and size with other national universities and states. The proposed university merger in South Australia will create more size and scale in competing for students and national funding against current Go8 universities. Increasing investment by foreign governments into overseas universities may be a greater challenge to the critical mass, ranking and resourcing of WA and Australian universities in the future.

Structural options

Q1. What types of structural options should be considered by the Panel and why?

The models proposed in the University Sector Review Discussion Paper of 1 May 2023 are all appropriate for consideration. Our core missions as universities can have complementary but often competing objectives and priorities. For example, models that might best enhance student experience do not necessarily align with optimal solutions to increase research excellence and performance.

Other University models and their governance structures should also be considered such as those exemplified by:

- University of [Michigan](#)
- University of [Toronto](#)
- University of [Arizona](#)

These structures provide opportunities for state-based and common governing structures which facilitate strategic decisions in the best interests of the State and of enhancing excellence and access.

Q2. Is there a structural option category, within the framework shown at Table 2 or additional to it, that is likely to deliver improved performance and sustainability of Western Australia's public university sector? What are the relative merits of it?

No single structure will optimally deliver all outcomes outlined in the Review's purpose.

A **hybrid structure** encompassing aspect of models presented in the Discussion Paper may be worthy of closer consideration, against prioritised key outcomes. Aspects of the structural models presented in the Discussion Paper could, when carefully considered, deliver improvements to performance and sustainability through enrolment growth and benefits to research capability.

Institutional coordination through a federation or consortium could create opportunities to share corporate services and research infrastructure facilities, potentially delivering operational efficiencies and critical mass while retaining diversity of options for students and staff.

Coordination or close cross-institutional collaboration of university activities could create efficiencies through economies of scale and some course consolidation, respecting the importance of the State having one institution that is research intensive and ranked in the top-100, and campuses that are easily accessible to students. In this model, institutions retain a high degree of autonomy over their vision and priorities.

Creating **precincts** for co-locating industry or public service providers (eg hospitals), alongside universities, would enhance research and cross-sectoral education in areas of significant importance to the State, and could facilitate industry engagement and focus workforce skill development for mutual benefit.

A **cross-sectoral merger** of universities and VET could create a seamless transition through education pathways for domestic students, providing greater access to higher education, opportunities for university students to gain TAFE awards and enhanced pathways into workforce opportunities.

A **central governing body** could coordinate key stakeholders including government, universities, schools, VET and industry, creating a more cohesive education offering to deliver future workforce and knowledge requirements while retaining choice for students.

Q3. To what extent are Western Australian public universities engaged in activities that align with the various structural option categories described in Table 2? How effective is this engagement?

WA public universities currently engage in activities that align with the categories 'Cooperation' and 'Coordination (Consortia)', with various levels of maturity and success. Cooperation models include formal collaboration agreements such as Joint Ventures, in addition to the 'informal collaboration' model in Table 2 of the Discussion Paper. Cooperation or Coordination-type models have been successful in jointly addressing infrastructure needs and to enhance critical mass in some research areas.

A Federation-type model would also offer similar benefits, possibly with further efficiencies in planning and delivery. Some current examples of coordination include:

1. University agreements allow researchers **access to infrastructure** at any WA university at comparable costs. This includes multi-million-dollar equipment investments such as the UWA Centre for Microscopy Characterisation and Analysis ([CMCA](#)) and the Curtin University [John de Laeter Centre](#). Some duplication of high-demand equipment and expertise between these facilities is needed operationally.
2. **Collaboration to attract major research infrastructure**, such as the National Collaborative Research Infrastructure Strategy (NCRIS) capabilities to WA. Examples include the Pawsey Supercomputing Centre and the WA Node of the National Imaging Facility. There is also collaboration on ARC Large Equipment and Infrastructure Fund (LEIF) applications. The International Centre for Radio Astronomy Research ([ICRAR](#)) is a high-profile co-funded joint venture between UWA, Curtin University and the State Government.
3. **Structured research partnerships** such as the [WA Agricultural Research Collaboration](#), bringing together the four WA public universities, CSIRO, DPIRD, and the Grower Group Alliance to accelerate agricultural research. The collaboration is expected to develop into a Joint Venture, with each partner making a financial commitment and with a representative steering committee in place.
4. Examples of **cooperation in education** include [The Rural Clinical School of WA](#) and UWA and South Metro TAFE jointly delivering an Associate Degree in Applied Technologies that provides hands-on industry training in the [ERDi Industry 4.0 Testlab](#).

Case study examples

The International Centre for Radio Astronomy Research (ICRAR) – a consortia between two WA universities attracting and developing world-class expertise and industry engagement

Independently ranked in the top 5 university-based radio astronomy research centres in the world

ICRAR, established by the State Government as a joint venture between UWA and Curtin, has established WA as the low frequency component of the Square Kilometre Array, **with more than 100 world leading scientists and engineers based in Western Australia**. Operating cooperatively, ICRAR is governed by a nine-member board appointed by the State Government, and an executive team represented by UWA and Curtin researchers which oversees research, administration, outreach, education and communication programs.

Over and above the State funding applied to this venture, ICRAR has achieved more than \$130M in research funding since its inception in 2009. Its operations are instrumental in developing skills, expertise and diversity of trained personnel in WA. Each year it attracts 60 to 80 postgraduate students focused on industry integration and produces between 20 to 30 graduates who mostly remain in WA, with more than 25 per cent taking up roles in industry.

ICRAR's mission is to build capacity in radio astronomy science, engineering and data science in WA working in partnership with Pawsey, CSIRO, the Australian SKA Pathfinder, the Murchison Widefield Array and the SKA Observatory. Through its translation and impact program it has engaged WA industries such as Terra15, Balance Utility Solutions, GCo Electricals, Geng, RGD Foundry, S&G Plastics, Convergence Electronics Support, AVI, Metis Design and Engineering, Vescient, Ferro Engineering and Westurn Engineering to benefit from SKA.

ICRAR's reach into the WA economy extends beyond astronomy and includes:

- A two-year project with Defence Science and Technology Group (DSTG) to investigate the effects of high-powered microwave on electronics;
- Developed machine learning models in the detection of syrup adulterants in Manuka and Jarrah honey variants with the Cooperative Research Centre (CRC) for Honey Bee Products (HBP);
- Collaboration with the Bureau of Meteorology (BOM) and the Oceans Institute (OI) to improve marine forecasting off the WA coast; and
- Supporting and strengthening Australia's space communication infrastructure with a \$6M, ASA Demonstrator Mission grant application to establish a three-node optical ground station network in WA called 'TeraNet' - a ground station network capable of supporting low-Earth orbit communications, lunar communications, and next-generation optical precise positioning and timing services.

The Rural Clinical School of WA (RCSWA) – a cooperation of three WA universities to secure the regional medical workforce

Transforming lives and improving health outcomes in rural communities

The Rural Clinical School of WA (RCSWA) provides hands on experiences and professional mentoring for penultimate and final year WA medical students in a 12-month program through a network of 15 sites across regional WA. Each site offers different expertise, providing diverse options and experiences. The RCS currently has more than 130 students on placements in the regions and since its formalisation in 2007 has hosted more than 1,500 students. This is facilitated by a network of 90 medical and academic staff across regional WA.

RCSWA is Federally funded under the Rural Health Multidisciplinary Training (RHMT) program aiming to improve the recruitment and retention of health professionals in rural and regional remote WA. This draws just over \$40M over three-year funding cycles to WA, with 95 per cent directed to the regions to support health workforce development.

RCSWA is a partnership between universities established in 2007 between UWA and Notre Dame University under a joint agreement of collaboration. Curtin was invited to join the partnership in 2019 to support their new medical program. RCAWA has a shared executive, comprising two members from each partner university and an independent member. UWA, through the Medical School, provides day-to-day support and is the primary recipient of the funding.

Research from RCSWA shows that students who take a regional placement are four times more likely to return to work in regional areas – key to supporting the regional WA health workforce and the State regional plan.

Data sources

Q4. What data sources should the Panel consider as it seeks to examine the relative merits of various structural options?

In examining structural options, it is important to consider education market data. Sources for this include population and higher education participation data (ABS), education sector enrolment data (Department of Education) and higher education equity reporting (NCSEHE). It is also important to review international student market data sources including publicly available enrolment data (Department of Education), Austrade research into international student behaviours and subscription-based trade research, including fee and academic entry criteria benchmarking.

Student satisfaction and graduate outcomes data (QILT), along with university ranking data, needs to be analysed deeply to fully understand its drivers and complexities. For example, student enrolment data should be examined through multiple lenses such as headcount and student load (EFTSL) and undergraduate and postgraduate offerings.

In addition, we recommend reviewing case studies of structural models in other global jurisdictions that have successful university systems and which represent a set of multiple affiliated universities and colleges that are geographically distributed. Usually, all member universities of a university system are governed by a system-wide governing body, such as a board of trustees or a board of regents. There are many system examples across Asia, Europe, South and North America.

Recommended additional data sources are detailed in Appendix A (p. 36)

Increasing enrolments and providing equitable access

Q5. How could structural change in the Western Australian public university sector enhance domestic and overseas student enrolments?

Enrolment numbers directly impact the financial resources available to the universities.

Recent State Government initiatives are increasing WA's share of international student enrolments. Structural change could further enhance the attractiveness of WA as a study destination if the change **strengthened the position of a Go8 university** firmly within Top-100 global rankings, while **continuing to have other university offerings** to attract the other segments of international markets.

Outside of population growth, domestic enrolments could potentially be boosted by structural change that enabled more people to **transition from VET into higher education** and change that could **increase access** from industry as well as from regional WA.

International Enrolments

To support WA's economic development **international education is crucial** and its growth is vital to the success of the State and its universities. In 2019, WA had a 5.7% share of international students enrolled in Higher Education in Australia. However, with a supportive State Government strategy in place, WA's share is increasing rapidly and by February 2023 WA held a 7.5% share of total enrolments with an even stronger share of commencing enrolments.³

Before Covid-19, there were 440,000 international students in higher education in Australia, spread across 43 universities with varying tuition fees, academic entry requirements, and perceived prestige (rankings). The market can be segmented into three tiers:

1. High-ranked Go8 universities with high entry criteria and premium fees
2. Mid-ranked universities with tuition fees around the national median
3. Lower-ranked universities with tuition fees well below the median

³ [Department of Education, International Student Data - Full Year Data, February 2023](#)

Each segment attracts a significant number of international students, particularly in popular courses, and students from different source countries and educational backgrounds within those countries can choose to study at universities in each segment. There is a relationship between prestige/rankings, academic entry standards and the level of tuition fees that may make it difficult for one university to compete right across the full spectrum of the international student market.

Structural options should position WA to address all three market segments effectively.

Domestic Enrolments

A solid domestic student base is essential for sustained growth. However, with only 110,914 domestic students in higher education in WA (2021)⁴ and a total population of 2.7 million⁵, WA's universities face a highly competitive environment compared to those in other states, as well as from the Eastern State Go8 universities which compete with UWA for WA's top ATAR students through scholarships and early offers.

Increasing WA domestic student numbers requires more than just population growth. One potential avenue is to **increase the proportion of the population attaining higher education**. As of 2021, 23.8% of WA's population aged over 15 had a bachelor or postgraduate qualification, lagging NSW and Victoria by 4-5%⁶.

Nevertheless, WA's population has a higher proportion of people with Certificate III and IV, Advanced Diploma, or Diploma qualifications than other states, at 27%⁵. Transition from VET to higher education is low in WA. In 2020, only 7% of WA's commencing enrolments in bachelor's pass courses had a VET qualification as their basis of admission - 4-6% below most other Australian states⁷. In comparison, dual-sector providers in other states attract more than 20% of their Bachelor students via this channel⁸. Therefore, **structural changes should aim to offer a better transition from VET to higher education**.

While 66.5% of the WA population completes education to Year 12 or above, the transition to higher education could be improved. The declining rate of ATAR completion is concerning, with only 43%

⁴ [Australian Government Department of Education, Selected Higher Education Statistics – 2021, 2023](#)

⁵ [Australian Bureau of Statistics, 2023](#)

⁶ [ABS, Census of Population and Housing: Education and training data summary 2021, October 2022](#)

⁷ [Department of Education, Approved 2020 Universities Australia Data Set, 2023](#)

of WA Year 12 students completing ATAR in 2022, down 10% from 2018⁸. To address this issue, there could be more coordination between secondary schools and universities. General courses offered by WACE (Western Australian Certificate of Education) have become more popular and enabling programs have been introduced into secondary school curricula. Structural change providing a level of **coordinated governance** could address these matters.

It is important to consider both school leavers and mature-age students when considering university admissions. In 2020, 36% of WA's commencing bachelor course students entered via alternative pathways and did not have secondary or higher education as their basis of admission. Structural change must ensure **a diverse range of offerings remains available** to cater to the needs of different student groups.

Q6. What type of structural change could help improve student access to course offerings for equity group students?

While the question refers to equity group students, we propose consideration be given to **all underrepresented student groups** including low SES / low ICSEA (Index of Community Socioeducational Advantage), disability, Indigenous, regional, remote, women in non-traditional areas, and non-English-speaking background students. In any future structure, students from equity backgrounds, and indeed from all underrepresented groups, must be represented at all institutions to ensure access to a range of different educational offerings. There is both a societal imperative and a Federal Government requirement for Australian universities to address the need to increase access, participation, and success of underrepresented cohorts of students. In any structural change, **all universities should represent the diversity of the State**, and as such, all cohorts should have access to all institutions, delivering on societal equality.

Currently all four public universities have programs to attract regional, remote and Indigenous students. With WA's geographical size, better coordination and less competition would allow universities to invest more in regions and reduce duplicated effort. Coordination through an **overarching governance model** could expand the reach of participation and access programs, and offer more programs across remote, regional and low ICSEA schools. This could include better coordination of processes around Regional University Centres.

⁸ SCSA, *Secondary Education Statistics, 2023*

In WA, higher education participation is below the national average for low SES, Indigenous and regional populations, and substantially so for people in regional WA⁹. To enable the foundations for university access and success, it is important to note that learning pathways are diverse and non-linear. Consideration should be given to learning pathways that span primary and secondary schools, VET and other education providers to allow students to make better choices at any point in their learning journey. Students from low SES backgrounds, regional and remote regions face a range of challenges including safe housing, health, nutrition and inadequate community infrastructure such as reliable internet access. The full journey to higher education must be supported in any structural change.

Any future structure should consider the full span of lifelong learning. WA currently has a partnership, for example, between UWA and ECU on the Children's University (CU). The CU is designed to raise aspirations among disadvantaged communities through partnerships between community organisations, parents and families, local primary schools and the universities. This partnership is novel within the international context of CU operations. UWA and ECU currently operate in designated parts of WA and there is opportunity through greater system-wide collaboration, for full State coverage. WA universities also collaborate with **schools** through leadership training programs and professional development programs for STEM teachers. UWA has a range of programs aimed at raising aspirations for tertiary education, including CU and Aspire UWA, which works with 70 partner schools and communities in Perth and regional WA. Girls in Engineering, in partnership with Rio Tinto, inspires female students to pursue STEM career pathways with industry sponsorship.

For Indigenous students there are additional factors that any university structure must consider. Physical distance from home and feelings of isolation when transitioning from community to university, foregrounding Indigenous Knowledge and ensuring high level Indigenous leadership is critical. **Greater numbers of Indigenous students within each university would positively impact their experience and success and build wider cultural understanding.**

⁹[Department of Education, Skills and Employment - Equity Performance Data](#)

While Indigenous students face many of the same issues as other equity students and can benefit from broader equity initiatives, Indigenous student, as First Nations have unique rights that need to be considered separately to the broader equity agenda. All Universities in Western Australia are located on Aboriginal lands. Critical to Indigenous student success is the recognition of Indigenous Knowledge systems, unique to Australia, and resourcing of these knowledge systems in WA's universities and more importantly in Aboriginal communities.

Q7. What are the barriers to Western Australian public universities providing access to regional and remote students? How could structural change help overcome these barriers?

For universities, a key barrier to facilitating access is the **high cost associated with providing and sustaining a physical and digital presence and supporting infrastructures**. Structural change that ameliorates this would enhance access. A **dual-sector provision model** should be considered but this needs to be accompanied by significant outreach activity and supported by government and industry. A **consortia approach** such as currently used by the Rural Clinical School provides a successful example to consider.

Currently, all WA universities offer outreach programs and various access pathways for the State's regional population, with more populous regional centres receiving better support, including Rural Health Centres and Regional University Centres. Further developing a regional presence throughout the State is essential, but sustaining this effort poses a challenge for any single university, given the relatively small populations and distances between Perth and WA's regional towns.

While fully online models are a potential solution, equitable access to physical and digital infrastructure and current technology limitations, including reliable internet connections, present significant barriers. Structural change has the potential to **support critical mass in expertise and financial efficiencies in providing online learning**.

Lifelong learning and VET integration

In regional and remote communities, limited employment options and a lack of exposure to careers and opportunities are common challenges. Many individuals are directly recruited into the workforce after school for jobs that do not require a degree. Thus, these communities need access to lifelong learning opportunities. Implementing structural changes that foster strong connections with VET providers and industry would be highly beneficial. **Dual-sector provision** as seen in other states could be an effective solution. For instance, CQU delivers dual-sector campus operations in Gladstone (population 35,000), Mackay (80,000), Rockhampton (77,000), Bundaberg (94,000), Emerald (16,000), and Noosa (54,000), offering both VET and university courses^{10,11}.

With structural change facilitating **coordination, and with State Government support**, WA could follow this model and sustainably establish dual-sector presences in some towns. One option is to have **one of WA's public universities deliver VET** (either alone or via a merger with a VET provider) to leverage the existing size and scale of outreach activity being conducted in the WA community.

¹⁰ Australian Bureau of Statistics, 2023 <https://www.abs.gov.au/statistics>

¹¹ www.cqu.edu.au

Enhancing the student experience

Q8. To what extent could structural change enhance the student experience?

According to QILT data, students' overall satisfaction is largely driven by the quality of teaching they receive, the well-structured delivery of their course and their sense of wellbeing¹². **Any new structure must deliver best practice in different modes of teaching and student support, including online, face-to-face, hybrid, trans-national, and dual sector.** Supporting universities in how they invest in the skills of academics to enhance the quality of teaching across these modes will support enhanced student experiences and success.

Efficiencies could be gained across central functions, including, student administration, finance, human resources and governance, thereby releasing resources to invest in the student experience. Increasing investment in teaching spaces, digital infrastructure and experiences, employability support, campus activation and industry partnerships for work integrated learning would foster a sense of belonging and connectedness.

Any future structure(s) will need to consider **the concept of the campus experience** at WA universities. UWA has, for example, more than 160 affiliated clubs and societies, organised under the Guild umbrella, and leads Australia for this aspect of the student experience. The clubs and societies range from subject societies to sports and other interest clubs. Each year, many hundreds of events are organised. Many have a long lineage i.e. they have been a consistent part of the history of the university. Clubs and societies are an important component of campus life and the broader student experience. They provide opportunities for students to make new friends thereby reducing loneliness and enhancing wellbeing, facilitate transition to university, develop student skills and explore their sporting, cultural and other interests. Together they contribute to the concept of university study as “more than a degree”. Clubs enhance WA society through volunteering, pro bono consultancy for not-for-profit organisations; student enterprise, regional participation, wellness initiatives, social justice programs, multicultural events and support for employability through links to local employers. Many UWA societies now have alumni liberally spread across WA industries, organisations and government and these networks continue to operate for the benefit of current students through work integrated learning opportunities and placements.

¹² [Quality Indicators for Learning and Teaching](#)

Improving research funding and impact

Q9. How could structural change realise opportunities for Western Australian public universities to become more competitive in attracting research funds while enhancing the profile of world-class research in Western Australia?

Beyond a potential short-term increment, ***it is unlikely that structural change in isolation could realise a long-term upward trend in research rankings, funding success or international research reputation.*** However, structural models that may increase critical mass through considered consolidation of research activities may deliver savings through efficiencies of scale, by sharing of research infrastructure and research support services. Savings realised could be directed to retaining and attracting high-calibre research talent to WA. Critical mass of research expertise coupled with State commitment to identified research specialties and national/international reputation would enhance the competitive edge for research funding and attract the highest-calibre research talent.

Structural change and WA research funding

Structural change and economies of scale will be insufficient to establish transformative changes in research funding. For any merged model to increase research funding to WA, such a merger would need to create both synergies and efficiencies without losing top researchers or creating reputational damage. While the dollar funding amount to a merged University would be higher, whether this creates more than additive funding is less certain. However, ***increased collaboration*** could strengthen competitive funding applications, with opportunities for co-location and increased critical mass potentially improving competitiveness.

It is important to note the scale of WA when considering research funding. The combined research income of WA universities in 2021 was around \$425M, with UWA's \$243M, Curtin's \$126M, Murdoch's \$34M, and ECU at \$23M. UWA sits 8th within the Go8, while all four WA public universities combined would be 6th of the Go8, comparatively close to UQ (\$442M) but well behind

UNSW, Monash, USyd and UMelb which each attract > \$500M.¹³ The combined NHMRC research income of WA universities in 2021 was \$39.3M (UWA \$27M, sitting 6th of the Go8). WA universities combined would still be 6th of the Go8, at approximately 60% of the value of UQ's NHMRC funding (\$67M). Melbourne (\$116M), Monash (\$111M), UNSW (\$80M) and USyd (\$79M) consistently dominate NHMRC funding success.¹⁴

Structural change and WA university rankings and research reputation

Consolidation of universities could positively affect ARWU rankings in the short-term because its quantity-based metrics are rarely size normalised. The same is not true of QS or THE, which are size normalised. Rankings are indicators for international students seeking a degree from a Top-100 university. ***It is important to distinguish rank change created by a merger from that due to true improvement in the research underpinning the ranking.*** That is, from the perspective of WA's research performance, simple consolidation of institutions will not deliver a transformational increase in research output (volume or quality) or capacity. WA universities already collaborate and co-author strongly. High calibre researchers in WA with strong engagement and collaboration with leading experts internationally, are critical to generate international impact and citations.

A merged university may have greater ***visibility and recognition*** nationally and internationally, and similar impact could be anticipated from a federated model, although less so from a consortia model. Enhanced visibility may attract high-profile researchers, international collaborations, visitors and research partnerships. Improved visibility provides opportunities to increase the quality and quantity of research collaboration, output and impact. However, this would require any federated or merged institution to maintain the strongest established research 'brand'.

Opportunities for structural changes to add value to WA university research operations comprise ***academic endeavours (research capacity and innovation), physical and digital infrastructure, and research support services.*** The clearest arguments for beneficial structural change are in physical and digital infrastructure and research support services. Models including federation, mergers and consortia could each bring efficiencies of infrastructure scale and access to WA universities, with savings directed back into improving research performance.

¹³ [Department of Education, Skills and Employment – HERDC Data](#)

¹⁴ [Ibid.](#)

Research capacity and innovation

Each of WA's four public universities has areas of research strength. Increasing critical mass by combining similar and complementary research programs could allow larger research institutes and groups to develop, potentially enhancing national competitiveness. Examples include combining agriculture capabilities (UWA, Murdoch, Curtin); energy capabilities (UWA, Curtin); environmental science (UWA, Murdoch); sports science (UWA, ECU) and neurosciences (UWA, Curtin, Murdoch). Consolidation could also offer critical mass in emerging fields such as synthetic biology, renewable energy and logistics.

Enhanced critical mass would be best served by physical co-location and unified leadership and vision. This could accelerate improvement beyond the current situation in WA where researchers collaborate across campuses. **Existing joint venture models**, such as the International Centre for Radio Astronomy Research (ICRAR), have performed the same function within current structures.

No existing two-institution merger would clearly provide a competitive advantage in research capacity that could not be achieved through other models such as research joint ventures or federation. Structural changes that result in teaching efficiencies and academic job losses would risk impact on research capacity.

A Consolidated Collaborative Model of Multiple Research Infrastructure Precincts

WA could consider **co-location of key research infrastructure** in precincts that accommodate researchers from all four public universities under a collaborative governance model. This could strengthen collaboration, reduce costs and potentially transform the State's capacity. A further benefit would be the attraction for industry and government to co-locate in such a precinct. BHP has recently located a new multi-million-dollar piece of equipment and associated staff within UWA's Centre for Microscopy Characterisation and Analysis ([CMCA](#)) for this reason. Such precincts would provide a single point of contact for industry and government to find capabilities and allocate investment to build capacity and align with State strategies.

Shared research infrastructure could reduce competition for infrastructure funding, reduce duplication of equipment and management structures as well as streamline operations and improve collaborative opportunities. Shared infrastructure can also assist resourcing requirements around

data storage, complex analysis, and enhance data sharing – these opportunities are possible via an efficient, shared approach to IT and digital research infrastructure.

Research Support Services

Each university runs a suite of *research operations*: management systems, support services, research ethics committees, biosecurity, foreign interference oversight, research safety, technology transfer, commercialisation, industry engagement, library and graduate research operations. Each university bears the cost, compliance, reporting and personnel of each function, independent of the size of its research endeavours. A consortium or federation of all four public universities may realise significant benefits by **combining and streamlining support** for some of these functions.

Consolidated library services may increase access to journals and reduce subscription costs. However, research development services, physical library staffing, and industry engagement would be less amenable to shared services.

Research training requires central university oversight of admission, progression, generic training, governance, and adherence to TEQSA requirements, while the actual training/research takes place at school/departmental level under academic supervision. In WA, there are fewer scholarships available than potential candidates. WA universities currently have differentiated admission requirements for PhD. Research training in WA may benefit from **overarching systems** such as supervisor and student registration, generic training, and industry internships within a federation or consortia structure.

Of note, any merged scenario would not increase the total pool of PhD scholarship funding within WA in the medium term, without an improvement in research performance and total student completions relative to national competitors. More completions could flow if structural change (eg federation or consortia) allowed **more flexibility in supervisor selection, cross-institutional co-supervision, candidate movement between institutions, and enhanced opportunities for student and supervisor training because of scale and efficiencies**. In more disruptive scenarios (eg mergers), prospective international PhD students may choose to avoid institutional uncertainty, impacting the PhD pipeline for several years.

Attracting and retaining high-calibre staff

Q10. How could structural change help position the Western Australian public university sector to attract and retain high-calibre staff?

A state university **system** that retains a choice of institutions with autonomy over their vision and priorities, while providing improved systems and infrastructure access, may assist in retaining and attracting high-calibre academic and professional staff.

Factors influencing academic staff retention and attraction include the academic reputation of the university, internal culture, institutional teaching or research excellence in an area of interest, student calibre, opportunities for promotion and recognition, a cohesive and established research agenda and culture, the quality of research infrastructure, collaborative opportunities with other researchers, and industry/government interest and support.

High-quality staff are attracted to an institution that meets their unique preferences and needs.

Structural change must maintain a diversity of public universities in WA to provide the necessary institutional variety, mobility and career progression opportunities. Limiting choice runs the risk that our best academic and professional staff will have to look outside WA for career progression opportunities.

Supporting the financial sustainability of the sector

Q11. How could structural change help to strengthen the financial performance and sustainability of the Western Australian public university sector?

The financial performance and sustainability of the WA public university sector must improve to enable the financial capacity to invest into our future and support the future needs of the State. Structural change which enables a foundation for revenue growth and diversification and creates opportunities for operational efficiencies could strengthen university financial sustainability.

The declining share of Commonwealth funding within WA (down 3.6% 2019-2021) continues to be compromised by increasing national competition. Across the sector we collectively have aging infrastructure and systems. ***Rationalisation and/or the removal of underperforming and duplicate infrastructure and systems would enable greater financial capacity as well as an opportunity to invest to modernise.*** This could enhance student experience and create an attractive proposition for high-calibre staff and industry partners to collaborate and innovate. Rationalisation could be achieved through several structural models; however, a model which takes a carefully planned and targeted approach to infrastructure planning and investment across all State universities may provide greatest return on investment.

Cooperation, collaboration and sharing of common infrastructure and services already occurs across some activities but greater critical mass and coordination is possible. Examples of where such opportunities may be further explored include (but not limited to):

- Shared services, systems and platforms such as HR, finance and student systems;
- Research operations in areas such as research integrity, ethics and biosafety;
- Shared career and employability services could streamline systems at each university while offering a simpler and more comprehensive engagement model for both students and industry/employers. This could be focused to areas of significance to the State;
- Collaborative mechanisms for libraries to generate scale for negotiating power and coordinated systems of supply; and
- Cooperative systems in teaching and learning could create efficiencies by consolidating resources and simplifying engagement for stakeholders. This will remove duplication and promote differentiation between universities.

The State's universities have relatively low underlying operating margins when excluding the fluctuation seen in investment income. The Office of Auditor General (OAG) report to government, Financial Audit Results – Universities and TAFEs 2021, highlights a number of key items which we consider important to understand and evaluate as part of any structural change including:

- The deficiencies in IT systems across the State entities as a result of continuing underinvestment across our State in digital infrastructure and systems; and
- Financial risk ratings of debt borrowings and reliance on international student income.

Leveraging further insights and data shared through member bodies such as CAUDIT and the Tertiary Education Facilities Management Association (TEFMA) on digital and physical infrastructure supports the opportunities for rationalisation and coordination of digital platforms and technologies and space. TEFMA data indicates that UWA currently has a similar Gross Floor Area (GFA) as the University of Adelaide and the space of the WA public universities combined is on average 20-25% greater than other Go8 Universities – suggesting a relatively low intensity by student and staff headcount across the State.

Strengthening relationships with business, industry, vocational, education and training (VET) and school sectors

Q12. What are some current examples of large scale, long-term collaboration that demonstrate successful partnerships between public universities and other sectors (eg business, industry, VET or school)?

WA universities actively collaborate with business, industry, not-for-profit, and Government in both research and education endeavours. UWA has many collaborations, examples include with schools (eg UWA and Shenton College), the City of Albany ([UWA Albany regional campus](#)), West Australian Symphony Orchestra ([UWA Conservatorium of Music](#)), various Industry Chairs (eg UWA Shell Chair in Offshore Engineering), various long-standing industry research partnerships (eg each spanning two decades: with Medela on mammary gland biology and breast pump technology; with Norddeutsche Pflanzenzucht Hans-Georg Lembke KG (NPZ) on canola breeding), and our close partnerships with the WA Medical Research Institutes.

Three examples of partnerships which are particularly noteworthy, enhanced by the structural arrangements, governance, and co-investment (cash and/or in-kind), are:

- International Centre for Radio Astronomy Research (ICRAR) (collaboration via formal joint venture) – UWA, Curtin University and WA Government, philanthropy (donor of the observatory) and industry engagement
- Rural Clinical School (collaboration)
- Collaboration between universities and **VET** often occurs through embedded courses and alternative entry pathways. One example is UWA and South Metro TAFE in WA which co-deliver an Associate Degree in Applied Technologies, providing hands-on training in the ERDi Industry 4.0 Testlab (see Q14 below), and there are other examples from other WA public universities. Additional arrangements of this type will be explored for specific areas and partnerships, but more generally this may be further supported by structural change which further promotes this approach.

Case study example

Canola Breeders program and collaboration between UWA and Norddeutsche Pflanzenzucht Hans-Georg Lembke KG (NPZ) – a collaborative research partnership which benefits industry partners and the State

Research transformed Canola from a small unreliable crop in 2001 to the third-most valuable crop in Australia

UWA's relationship with Norddeutsche Pflanzenzucht Hans-Georg Lembke KG (NPZ) is a 20-year industry and research partnership born from grass roots farming. Canola was not a successful crop due to its poor adaptation and low yield, especially in drier regions of the Australian grain belt and so farmers brought their concerns to UWA and the Grains Research and Development Corporation (GRDC). The **Canola Breeders Western Australia Pty Ltd**— a joint venture company— was formed to begin a canola breeding program. UWA were founding shareholders **with NPZ quickly joining as an equal shareholder, with agreements used to define and regulate the Canola Breeders program** within a successful research framework. **UWA established** the UWA Institute of Agriculture and recruited "Professor of Practice" Wallace Cowling. NPZ brought international business credibility to Canola Breeders and UWA provided quality of the research environment, campus space for developing the canola hybrids, and for the regional field trials that followed, as well as the institutional accreditation for the Federal oversight committees on gene technology and assistance with compliance. The high impact partnership resulted, which since 2002 has led to 37 new commercial hybrid canola varieties with increased yield and disease resistance.

UWA derived canola varieties have contributed significantly to canola production in Australia, and today, canola is the most profitable crop in many areas of Southern and Western Australia. Canola production in WA nearly doubled during the 2000's due to UWA's research engagement with industry and the WA grass roots community. By way of example, UWA canola variety CB Tanami, was grown in low rainfall regions and represented 13% of canola deliveries in WA in 2009, adding \$67 million of income to WA growers and agricultural industries. In 2021 canola was the 3rd most valuable crop in Australia with more than 6 million tonnes harvested.

Q13. How could structural change strengthen Western Australian public universities' relationship with business, industry and VET providers to underpin a more cohesive tertiary sector?

A **coordinated and strategic planning approach** could identify opportunities for collaboration and strategies to create a more cohesive tertiary sector, while addressing common challenges and state priorities. This could be achieved by adopting a common governance in a state-style system approach or, within status quo led by a new tertiary education advisory council or independent board, comprising representatives from WA public universities, business, industry, and VET providers. Such an approach would align universities with State and industry priorities, while maintaining strategic differentiation between universities to support student choice and growth in domestic and international student numbers. We take this opportunity to note that universities have a broader purpose than just producing job-ready workers, so they cannot be expected to focus solely on that objective.

Such coordination could assist in **long-term industry development to benefit our State**. For example, innovation hubs that align with State Government industry priorities could bring together researchers, students, businesses, and VET providers to collaborate on research and development projects. These hubs can facilitate sharing expertise and resources, leading to development of new products, technologies, and services. The results may be enhanced research investment, student placements, employment opportunities and deeper collaborative relationships. The State-led development of a collaborative and innovative hub at Lot Fourteen in SA is an example of this approach, aimed at preparing for the future economy.

When considering cohesion within the tertiary sector and alignment with the adjacent school and industry sectors, we highlight that motivations and priorities of students, schools, tertiary institutions, government and employers do not always align.

Meeting current and future knowledge and skills needs

Q14. How well are Western Australian public universities working with business and industry to meet the State's future labour market skill and knowledge requirements?

Universities are active collaborators with business and industry in the development of relevant courses, creating on-the-job learning, upskilling the existing workforce and undertaking industry-relevant research. Targeted collaborative opportunities in areas of state workforce or economic priorities may enhance this.

Acknowledging that over half of new jobs will require a bachelor's degree or higher¹⁵, universities in WA are actively collaborating with industry. Such collaboration aims to bridge gaps between current and future needs in areas such as health and aged care, ICT, education, and engineering. As a result, the number of students studying in these areas (except engineering) has increased across all universities in WA¹⁶.

Each WA university has at least one **industry advisory board**, some at discipline level. These boards play an active role in designing and reviewing curricula to ensure they reflect contemporary practice and job-ready attributes. Advisory Board members champion universities in their workplaces and support close partnerships. Professional accrediting bodies also provide guidance and regulation for workforce skills and planning. Workforce priority areas in engineering, health and social support, education and technology are all accredited by relevant bodies to ensure that courses, skills, and experiences meet workforce needs.

Moreover, all institutions offer **work-integrated learning opportunities** in collaboration with business and industry, to help students build workforce skills and gain practical experience. For example, opportunities at UWA include required professional practice, experiences that earn course credits, industry-led and real-world class projects, industry participation in classes, industry PhD internships, and field trips.

¹⁵ [National Skills Commission - Employment Projections five years to November 2026](#)

¹⁶ *Ibid.*

Further, all WA universities have ***industry-engagement functions***. These teams comprise skilled business development professionals with expertise in various industry sectors who support funding and research initiatives, internships and work-integrated learning and commercialisation. They play a crucial role in connecting knowledge generation with translation of research and the development of needs-led research. These relationships also provide valuable insights into course needs and research opportunities that contribute to WA's future economy. For instance, UWA's research has been cited in 115 Australian Government policy documents since 2020, covering areas including health, education, biodiversity, and environmental science¹⁷.

Federal Government funding opportunities have enabled some innovative approaches to workforce upskilling. For instance, UWA has collaborated with industry to ***meet the need for technology upskilling*** to support Industry 4.0, resulting in the Associate Degree in Applied Technologies. The program is co-delivered with South Metro TAFE in a 50:50 partnership which leverages both hands-on training and cutting-edge knowledge. The final semester takes place in the ERDi Industry 4.0 Testlab, providing industry-ready experience. This successful model is being expanded into other areas, including a credit recognition program through TAFE, addressing the increasing need for higher qualifications in critical areas. Notably, one program is dedicated to upskilling women in STEM-heavy industries.

WA universities also ***cater to industry knowledge requirements*** through workshops aimed at professional development in fields such as engineering, oil and gas, geotechnics, and oceanography. ***Micro-credentialing*** has become an important contributor to continuing professional development in many fields. UWA works with industry to upskill professionals in areas including sleep-related breathing disorders, structural geology and data analysis. Several WA universities have developed upskilling microcredentials in response to the shortage of teachers qualified to teach ATAR.

However, there is a lack of coordination between universities, government and industry in identifying and planning for the State's future workforce needs. This could be improved through a cross-sectoral network that supports a differentiated State identity around areas of economic excellence, workforce capabilities or state output.

¹⁷ [Elsevier SciVal extract May 2023](#)

Providing the best outcomes for Western Australia

Q15. What are your overall thoughts on the options for structural change that would provide the best outcomes for:

- a. the Western Australian university sector (for students and staff, research, financial sustainability and rankings)?
- b. Western Australia (skills and knowledge needs, economic growth and workforce planning)?

For optimal success, UWA suggests that a combination of structural models be explored, as each option may only address some of the necessary factors. This approach would benefit both Western Australia and the university sector.

(a) the Western Australian university sector (for students and staff, research, financial sustainability and rankings)?

Models such as federation, mergers, and consortia can achieve efficiencies of scale and promote equitable access. Elements of the consortium and federated models could promote cooperation, collaboration, sharing of research infrastructure and systems, delivering efficiencies, enhanced expertise and critical mass.

Although sharing **research infrastructure and resources** already occurs, incorporating elements of both federated and consortium models could enhance these efforts. These models could reduce competition for infrastructure funding, eliminate duplication of equipment, simplify access, and improve collaborative opportunities. In addition, they can foster development of specialised platform expertise, make it easier for institutions to operate and maintain equipment and facilities, and simplify engagement with industry. Doing so would allow institutions to retain autonomy over their research vision while benefiting from shared resources and retaining and attracting high-calibre staff.

To improve collaboration between universities, the VET sector, schools, and industry, a **Regional Education body** could be established. Such a body could optimise the use of assets and ensure that the right qualifications and training are available to the appropriate students.

To enhance the overall **student experience**, the structure should incorporate best practices for teaching in various modes and consider the vast geographical expanse of the region. Campus life must be both physical and digital, with locations that are convenient for students and industry, and accessible to non-traditional students.

To attract more **international students** to Western Australia, offering coordinated tiered offerings for high-volume courses is critical. This can be achieved by providing differentiated strengths and offerings that cater to the diverse needs of various student segments.

(b) Western Australia (skills and knowledge needs, economic growth and workforce planning)?

There is an opportunity to enhance the coordination and cooperation of universities with Government and industry by establishing a **cross-sectoral network**. This network would identify the knowledge and skills required to meet the state's future workforce requirements.

In addition, creating **precincts** for co-locating industry, research, and cross-sectoral education in areas of significant importance to the State can advance industries beyond mining, promoting diversification and long-term economic sustainability.

Improving career and employability services could be achieved through **shared systems** between universities, simplifying engagement for students and employers. The University of California's San Francisco and Berkley institutions collaborated on a healthcare service-learning program, while the University of Sydney and UNSW offer shared services such as careers counselling, job posting and networking.

Increasing critical mass through combining similar and complementary research programs could allow larger institutes to develop, which would be more competitive on a national scale and help WA advance its knowledge and skills needs in a number of key areas.

Appendix A – Data sources for consideration

	Data source for consideration	Context and purpose
1	Australian Bureau of Statistics (ABS) population numbers	Population and growth rates of WA versus other states in comparison to domestic participation rates in higher education to benchmark our position
2	Dept of Education statistics of school leavers into VET versus higher education in each state	Participation rates by state of school leavers into VET versus higher education to gain a perspective on school leaver pathways given the employment opportunities in WA
3	Department of Education, Skills and Employment (DESE)- student to staff ratios	Staff to Student ratio (FTE to EFTSL) to review the staffing levels of universities and the trade-off of efficiency versus student experience
4	HDR (Higher Degree by Research) numbers and completions	HDR numbers and completions are key metrics about how the university sector is building the research workforce of the future and key subject matter experts for industry and governments
5	Jobs and Skills Australia	Workforce and skills forecasts to further understand the level of education required to support these priorities, in the context of the state’s future economic priorities
6	National Centre for Student Equity in Higher Education (NCSEHE)	Student data that supports discussion and analysis of equity issues in WA and on a comparative basis across other jurisdictions
7	National Centre for Vocational Education Research (NCVER) VET enrolment data	Total VET students and courses reports on students undertaking nationally recognised VET on a government funded or fee-for-service basis
8	Quality Indicators for Learning and Research (QILT)	QILT provides insights into the quality of the student experience in the higher education sector and by university
9	State Priority Occupation List (SPOL)	SPOL is produced by the Government of Western Australia annually to inform and guide workforce planning and development and assists universities in education and training plans