SUBMISSION

Submission to the Joint Standing Committee on Migration

# Submission to the inquiry into the role of permanent migration in nation building

13 February 2023

**The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.**

ATSE welcomes the opportunity to provide a submission to the Joint Standing Committee on Migration's inquiry into the role of permanent migration in nation building. This submission argues that migrants play a vital role in Australia's world-class STEM (science, technology, engineering and mathematics), both in the research sector and in translation and application; and fill critical skills shortages across the country. A comprehensive, nationwide taxonomy of skills will help to identify shortages of priority skills that require migration to help resolve. Streamlining the visa approvals process for early career STEM researchers and professionals will help Australia to attract and retain the brightest minds, and ensure Australia remains an internationally competitive destination for highly-skilled migrants.

ATSE makes the following recommendations:

**Recommendation 1:** The Australian Government develops a national strategy to better utilise the skills of migrant workers in the Australian workforce.

**Recommendation 2:** The Australian Government develops a comprehensive national skills taxonomy to identify skills shortages in critical industries to direct skilled migration priorities.

**Recommendation 3:** The Australian Government streamlines the visa process for international research students seeking to study in Australia and postdoctoral researchers employed by Australian research institutions.

**Recommendation 4:** The Australian Government reduces visa processing timelines to ensure talented STEM professionals are not deterred from applying for visas due to excessive wait times or poached by international competitors while waiting for visas to be processed.

## The contribution of migrants to science and technology

Australia's world-class science and technology sector is built upon international collaboration and migration. More than one-third of Australia's STEM workforce was born overseas (Australian Academy of Science, 2017), with that figure rising to over 58% for engineers (Engineers Australia, 2022a). Furthermore, the contribution of migrants to Australian science and technology research and knowledge translation has been enormous, with approximately one-third of the Prime Minister's Prize for Science winners since 2000 born overseas. Migrants' diversity of experience, cultural backgrounds and approaches to problem-solving strengthen Australian industry and research and improve our ability to respond to emerging challenges. Migrants can also help relieve critical workplace skill shortages across industry, helping to manage shortages of skilled local workers.

However, Australia must ensure that the migrant workforce is fully supported to engage with local industry at a level commensurate with their skills. Skilled migrants can experience significant barriers to employment in Australia, that leading to unemployment or employment in roles below their skill level. For example, migrant engineers can struggle to have their international qualifications recognised, are disadvantaged by a lack of local networks and face visa restrictions (Engineers Australia, 2022b). As a result, migrant workers are much less likely to work in-field in areas of crucial skills shortages, such as engineering (Engineers Australia, 2022a). While Australia's formal support for the UNESCO Global Convention of the Recognition of Qualification concerning Higher Education is an important step, a national strategy to optimise the use of already available migrant skills in key STEM fields would immediately support the integration of migrant workers into the Australian labour force and fill vital current skills shortages.

To ensure that skilled migration is targeted, efficient and sustainable, policy change is required, including in concert with Jobs and Skills Australia, to better identify areas of critical skills deficits and to optimise the visa process.

**Recommendation 1:** The Australian Government develops a national strategy to better utilise the skills of migrant workers in the Australian workforce.

Level 2, 28 National Circuit
Forrest ACT 2603
Australia

PO Box 4776
Kingston ACT 2604
Australia

+61 2 6185 3240
info@atse.org.au
atse.org.au

ABN 58 008 520 394
ACN 008 520 394

Australian Academy of Technological Sciences & Engineering

## Meeting Australia's skills needs

Migrants to Australia will continue to play a vital role in meeting Australia's need for critical skills, particularly in areas of rapid growth or with long-term graduate shortages, such as technology and engineering; this is urgent as Australia seeks to transition its energy economy. It is important to appropriately target skilled migration towards areas of the highest national priorities and areas where local talent is unable to meet the demand. For example, it is expected that Australia will need 156,000 new technology workers by 2025 to meet growing industry demand (RMIT, 2021). Australian universities are currently unable to meet industry demand for engineering graduates, making migration key to the continued growth of Australian engineering to support plans to build and upgrade crucial national infrastructure and support the clean energy transition (Engineers Australia, 2022a).

A well-targeted, sustainable migration system enables priority areas to be adequately resourced, while having minimal impact on local workforce participation and without providing downward pressure on local wages. Developing a single understanding and shared language around skills across all sectors would support a collaborative and consistent approach from both industry and government to identify skills gaps and target appropriately skilled migrants. Jobs and Skills Australia would be best placed to lead this, building on the National Skills Commission's work on the Australian Skills Classification. Forecasting trends, based on this taxonomy of skills, would enable the identification of areas of greatest short-term skills needs, as well likely long-term needs, enabling both targeted migration and responsive local skills training (Australian Academy of Technological Sciences and Engineering, 2022), over time reducing reliance on migration to manage skills shortages.

**Recommendation 2:** The Australian Government develops a comprehensive national skills taxonomy to identify skills shortages in critical industries to direct skilled migration and education priorities.

## Making it easier to recruit the leading STEM professionals to Australia

While Australia has many factors that make it an attractive destination for STEM experts, there is stiff competition from alternative destinations. This means that Australia must be agile and responsive to attract leading emerging and established STEM professionals.

Research students are the biggest human resource behind Australian research and development (Australian Bureau of Statistics, 2022), and thus, Australian universities are motivated to recruit the best and brightest post-graduate students. International students currently comprise 39% of research degree completions (Department of Education, 2022). Continuing to attract top overseas research students is critical to the Australian research effort and also provides a pipeline of highly talented permanent migrants working in research institutions and industry. Australia's ability to compete with international rivals for the best research students is crucial to maintain and build Australia's research capacity.

However, many students find the process of applying for and obtaining student visas for entry into Australia cumbersome and difficult. ATSE's Fellows have reported instances of students being poached by international research institutions while awaiting visa approvals from Australia. The cumbersome visa process makes Australia a less attractive destination for the best and brightest students, depriving Australia's universities and research institutions of highly talented individuals. Visa approvals often consist of a long, drawn-out, process requiring large volumes of documentation and check, and slow processing speeds. Streamlining and simplifying the visa application process for research students will reduce the opportunity for students to be poached and will help to make Australia a more attractive destination in a highly competitive market.

Post-graduation, recruitment of international talent across research and industry operates in a highly competitive market, with time constraints that make delays in visa approvals highly disruptive. In addition to similar market pressures as postgraduate students, post-doctoral researchers are typically funded through short-term Australian Research Council (ARC), National Health and Medical Research Council (NHMRC) or other short-term grants. Delays in visa approvals results in these time-limited projects of national importance being heavily impacted, reducing Australia's research output. In industry, administrative burdens in vias applications and long processing times makes Australia less attractive than Employer-sponsored visa schemes should also be further promoted, and with accelerated visa processing timelines, since these visa applicants have already been shortlisted by employers to contribute toward their operations. Reducing the administrative burden and visa processing times for migrant researchers would have a positive impact on Australia's research capacity and talent pool.

**Recommendation 3:** The Australian Government streamlines the visa process for international research students seeking to study in Australia and postdoctoral researchers employed by Australian research institutions.

**Recommendation 4:** The Australian Government reduces visa processing timelines to ensure talented STEM professionals are not deterred from applying for visas due to excessive wait times or poached by international competitors while waiting for visas to be processed.

Level 2, 28 National Circuit
Forrest ACT 2603
Australia

PO Box 4776
Kingston ACT 2604
Australia

+61 2 6185 3240
info@atse.org.au
atse.org.au

ABN 58 008 520 394
ACN 008 520 394

Australian Academy of Technological Sciences & Engineering

## References

Australian Academy of Science. (2017). *Submission to the Department of Immigration and Border Protection's transformation of Australia's visa system*. https://immi.homeaffairs.gov.au/immigration-reform-subsite/files/australian-academy-of-science.pdf

Australian Academy of Technological Sciences and Engineering. (2022). *Our STEM skilled future An education roadmap for an innovative workforce*. https://www.atse.org.au/research-and-policy/publications/publication/our-stem-skilled-future-an-education-roadmap-for-an-innovative-workforce/

Australian Bureau of Statistics. (2022). *81110DO007_2020 Research and Experimental Development, Higher Education Organisations, Australia, 2020*. https://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-higher-education-organisations-australia/latest-release

Department of Education. (2022). *Higher Education Statistics 2020 Section 14 Award Course Completions*. https://www.education.gov.au/higher-education-statistics/resources/2020-section-14-award-course-completions

Engineers Australia. (2022a). *Engineering skills - supply and demand Discussion paper*. https://www.engineersaustralia.org.au/sites/default/files/2022-03/Engineers-Australia-Skills-Discussion-Paper-20220310.pdf

Engineers Australia. (2022b). *Strengthening the engineering workforce in Australia*. https://www.engineersaustralia.org.au/publications/strengthening-engineering-workforce-australia

RMIT. (2021). *Ready, set, upskill: Effective training for the jobs of tomorrow*. https://online.rmit.edu.au/insights/2021