

SCIENCE & TECHNOLOGY AUSTRALIA

POLICY SUBMISSION

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Response to the consultation paper on Jobs and Skills Australia's 2024-25 work plan development

Science & Technology Australia thanks Jobs and Skills Australia (JSA) for the opportunity to give feedback on the consultation paper on the development of Job and Skills Australia's (JSA's) workplan for 2024-25.

Science & Technology Australia is the peak body for the nation's science and technology sectors, representing 139 member organisations and more than 115,000 scientists and technologists. We connect science and technology with governments, business and the community to advance science's role in solving some of humanity's greatest challenges.

STA strongly supports JSA and its work. In a fast-changing national and global economy, where success is increasingly based on knowledge and skills, accurate data on labour market demand and supply are vital to Australia's future prosperity. Useful projections of future demand and supply – both at the aggregate level and for sectors, industries and occupations – are an increasingly indispensable input into Government policy development and to the nation's employers in the business and wider community.

Data and projections are especially important in the STEM disciplines and occupations which will be crucial to Australia's capacity to seize the economic advantage in coming years.

Science & Technology Australia recommendations

Science & Technology Australia Recommendation 1:

JSA's analysis, projections and reporting should include explicit coverage of STEM skills.

Science & Technology Australia Recommendation 2:

JSA's reporting and projections should include more work on the acquisition, development and application of workplace skills over the course of careers.

Science & Technology Australia Recommendation 3:

JSA's analytical work should include examination of retention in industries and occupations of interest – including the STEM sector. JSA could look at retention rates, reasons for non-retention and efforts by employers, professional associations and governments to boost retention.

STA is keen to work more closely with JSA and we are very open to discussing opportunities for collaboration.

Professor Sharath Sriram
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What issues, topics and research questions, research studies and projects would you suggest JSA explore?

STA welcomes the priorities outlined in the consultation paper and the roadmap. We are keen to work with JSA as may be most useful and mutually beneficial.

Skills in STEM – science, technology, engineering and maths – are the path to Australian prosperity. Growing our skilled STEM workforce is absolutely essential to power the nation’s next era of economic growth.

We propose JSA’s reporting and projection work should include a focus on STEM skills, as these skills are increasingly important to success and prosperity for individuals, firms and the nation. ‘STEM skills’ is a broad term that covers a range from generic, transferrable quantitative skills right through to advanced, niche skills in highly specialised jobs. STEM skills range from competencies in many different VET qualifications through to graduate skills and high-level research capabilities. All of these aspects of ‘STEM skills’ have a role in equipping Australians for work in wide variety of occupations. STEM skills are in demand in a wide range of occupations and industries and they are taught in a very broad range of qualifications at different levels. STEM skills are an increasingly important component of labour market skills.

Science & Technology Australia Recommendation 1:

JSA’s analysis, projections and reporting should include explicit coverage of STEM skills.

Which of the ‘roadmap opportunities’ is/are most important in the short term?

STA’s view is that the most important element of the roadmap in the short term is 8. ‘Identifying key enhancements in the evidence base that will assist the development of the roadmap’.

STA believes that the short-term priority for JSA and its stakeholders is to continue to work on building and improving the evidence base, both through making more effective use of data already collected by government agencies or other bodies and also through identifying areas where new data need to be collected. Continuing work to coordinate the reporting and presentation of data in clearer, more consistent formats is vital to making effective labour market intelligence available to policymakers, stakeholders and the public.

Another important short-term priority on the roadmap is 14 ‘Establish a dialogue between JSA and the Productivity Commission to identify key elements of the national jobs and skills roadmap that will assist Australia’s productivity growth strategy’.

It is important that JSA’s insights and data inform development of policy on Australia’s future economic development and productivity. Formal links, processes and mechanisms will be conducive to such exchange of insights and information and to ensuring that JSA has effective input into discussion and formulation of relevant government policy.



Which of the roadmap opportunities has the most impact on STA's own work?

The roadmap priority most closely aligned with STA's work is 10. 'Shaping a national skills taxonomy in a collaborative partnership between business, unions, higher education, VET and the Jobs Skills Councils (JSCs)'.

Skills taxonomies covering a comprehensive range of qualifications and occupations, across educational sub-sectors, will play a vital role in making clear to all stakeholders – from prospective students and recent graduates through to education and training providers and employers – what skills are needed on the job, and where these skills can be sourced. **Easy to read and well-documented skills taxonomies will make it clearer that while highly specialised skills are of the first importance in many key occupations, many skills are transferrable across occupations and industries. This is crucial information for employers – and for education and training institutions.** Solid foundational skills underpin employability and performance across the labour market.

Skills taxonomies will give a clearer and better evidenced picture of the range of skills needed in a particular industry. It will also clarify the range of skills – and applications of skills – delivered by a particular group of educational qualifications.

STA believes that for all these reasons, skills taxonomies can deepen the evidence on both the labour market's need for STEM skills and on what STEM skills can offer employers. Taxonomies can also highlight the types of education and training providers needed to deliver the STEM skills that employers need.

Are there changes that STA would like to see in the roadmap?

Science & Technology Australia urges Jobs and Skills Australia to add a commitment to measuring STEM skills in the roadmap.

STEM skills at all levels will be increasingly important for Australia's future prosperity and economic growth. STEM skills are important to a wide variety of occupations and industries and they are transferrable across the labour market and over the course of people's careers. STEM skills are taught in a wide variety of different courses at different levels. The value of STEM skills in the broad may be incompletely understood or simply underestimated among employers: **STA's research suggests at least some employers have a limited view of the skills that STEM graduates bring and the applicability of these to the operations of their business¹.**

STEM graduates learn a variety of different skills that are very valuable in the workplace, both within and well beyond traditional STEM occupations and industries. As an integral part of their studies, STEM graduates learn how to predict and evaluate outcomes, how to think strategically and outside the box and how to adapt to change. These skills, experiences and attitudes foster high levels of resilience and adaptability – vital attributes in a rapidly changing economy.

More explicit reporting of STEM skills in the broad would help to address limited understanding of the labour market value of these skills.

What new or additional issues/questions should be examined to expand the evidence base?

STA advocates that JSA's reporting and projections would be even more valuable if they included more on the acquisition, development and application of workplace skills over the course of people's careers. Employment of newly qualified people is vitally important, but it is a relatively small proportion of the overall supply of skills to the labour market. **More work on how employers**

¹ Forthcoming STA research on *STEM Career Pathways*.



identify the skills they need and how employees develop and apply skills over the career would strengthen JSA's work and increase its value.

Science & Technology Australia Recommendation 2:

JSA's reporting and projections should include more work on the acquisition, development and application of workplace skills over the course of careers.

Related to this, JSA could very usefully extend their analytical work to issues of retention in particular industries and occupations. In the STEM sector – and in several other areas too – retention of skilled and qualified staff can be a problem, both where these staff have gained their qualifications in Australia and where staff have come to this country through skilled migration pathways. JSA could do more detailed analysis on rates of retention in industries and occupations of interest and on destinations of those who leave. JSA could also investigate reasons for non-retention as well as initiatives by employers, professional bodies and governments to support retention.

Science & Technology Australia Recommendation 3:

JSA's analytical work should include examination of retention in industries and occupations of interest – including the STEM sector. JSA could look at retention rates, reasons for non-retention and efforts by employers, professional associations and governments to boost retention.

STA would be happy to discuss any of these matters further with JSA. As stated above, STA is very keen to identify opportunities for collaboration, where JSA and STA could work together for mutual benefit. STA's uniquely broad membership – scientists and technologists in a very wide variety of fields and at different career stages – is ready to assist JSA, using the unique set of expertise and connections available through the STA network.

