



# Rebuilding Vocational Training in a Transforming Industry

The Centre for Future Work at The Australia Institute has released a new report, *Advanced Skills for Advanced Manufacturing: Rebuilding Vocational Training in a Transforming Industry*. This report seeks to address the skills shortage that could hamper future employment gains in the Australian manufacturing sector.

## Capabilities of the Current Manufacturing Workforce

It may seem counter-intuitive that an industry that has lost over 100,000 positions in the past decade might experience a shortage of workers. But, after years of decline, Australia's manufacturing industry is finally recovering – adding almost 50,000 jobs in the last year, one of the best job-creation records of any sector in the whole economy.

However, this recovery could be cut short by growing shortages of skilled workers, according to the Centre for Future Work's report on vocational training in manufacturing.

The report identifies key factors behind the rapid emergence of skills shortages in manufacturing. The factors include the rebound in total manufacturing employment; the reorientation of production around more specialised and skills-intensive advanced manufacturing strategies, which necessitates upskilling and ongoing training as

companies adopt these advanced manufacturing techniques and new digital technologies; and the sector's ageing workforce, creating a looming demographic transition for skilled workers (as existing skilled workers, many of whom are approaching retirement age, begin to exit the industry).

Moreover, the sectoral and occupational diversity of manufacturing jobs means that shortages can arise in specific fields, despite overall labour supply conditions that are relatively abundant. The highly specific nature of manufacturing skills (across sectors and occupations), also creates difficulty for workers looking to move from shrinking sectors to growing sectors.

According to Dr Jim Stanford, Director of the Centre for Future Work, "Manufacturing is again making a positive contribution to Australia's economic progress after over a decade of decline. We don't want to squander this potential. If Australia doesn't get its act together on vocational training, this will be a wasted opportunity for manufacturing."

"No sector feels the pain of the failure of vocational training more than manufacturing, precisely because advanced skills are so essential

for the success of advanced manufacturing techniques."

"Stable, well-funded, high-quality public institutions must be the anchors of any successful VET system. Public institutions are the only ones with the resources, the connections, and the stability to provide manufacturers with a steady supply of world-class skilled workers," said Stanford.

**“Manufacturing stakeholders need to work together to strengthen vocational education and training.”**

## Vocational Education in Crisis

According to interviews conducted by the Centre for Future Work with multiple industry stakeholders, the current Vocational Education and Training (VET) system is definitely not meeting the needs of the manufacturing industry for top-quality skilled workers – nor the needs of the wider community for access to high-quality training and corresponding opportunities for solid work.

At present, training delivery is largely oriented around competency-based, fragmented packages of

knowledge. These packages may address narrow, enterprise-specific requirements, but typically do not permit workers to accumulate comprehensive, recognised, and portable qualifications.

### The Cause of the Crisis

According to the report, Australia's VET system is experiencing a 'profound and multidimensional crisis', caused by several factors.

There has been a sustained decline in fiscal support for vocational training at both a State and Commonwealth level, as the financial focus has been placed on the university sector to the neglect of VET. State and Commonwealth spending was cut by almost 20% between 2011-2012 and 2015-2016, and the 2017 Commonwealth budget included a \$177 million cut in vocational education.

The sector also underwent a devastating and failed policy experiment with the marketisation of vocational education services, whereby control over course offerings, course delivery, and student recruitment was decentralised to a supposed 'market' dominated by for-profit training providers. Worthless qualifications have proliferated, driven by incentives and exploited by fraudulent for-profit enterprises.

"Recent experiments with market-based vocational training have been a waste, they have damaged confidence in the skills system among both potential students and employers," said Stanford.

In addition to this disastrous experiment, the report points out that for-profit VET training providers still received enormous subsidies through the poorly controlled VET FEE-HELP system. This has led to a wastage of public resources, while also encouraging both unethical and unproductive practices within the for-profit system.

As a result of these policy failures, the TAFE system now faces a severe structural crisis. It has lost

its position as a reliable and quality source of vocational education. Why? Primarily because TAFEs must compete for students and funds with for-profit providers, rather than focus on what should be their core responsibility: providing quality education.

In the context of chronic underfunding and the misallocation of resources through the failed experiment with marketisation, the need for VET providers to continually upgrade and modernise their course offerings, and to develop entire new qualifications in line with the emerging needs of advanced manufacturing, has largely gone unmet.

The most intense skills shortages experienced by manufacturing employers are more complex than simply a shortage of suitable applicants with a particular qualification. Rather, employers are seeking a more comprehensive set of qualifications and attributes, reflecting the more challenging, judgment-based, and technology-intensive nature of manufacturing work. In this regard, important attention must be paid to the reform and modernisation of curricula, skill sets, and entire qualifications.

A related problem in the current VET model is the increasing concentration of training around small, more fragmented units. The marketised user-pay delivery model for VET in Australia contributes to this problem, since it is less expensive for students to enroll in narrower, 'bite-size' subjects – as compared to undertaking full qualifications.

Competency-based, fragmented packages of knowledge address narrow, enterprise-specific requirements; they generally do not allow workers to accumulate comprehensive, recognised, and portable qualifications. In the resulting culture of 'training for the enterprise', employers commission relatively narrow, firm-specific capacities, not comprehensive and flexible qualifications. This inhibits the ability of the workforce

to respond, adapt and redeploy in the face of changes in product demand, technology, and personal circumstances.

All these failures have had a direct effect on enrolment numbers. In 2012, over 500,000 people were enrolled in VET training programs around Australia. By 2017, that number had dropped to 269,000.

Metalwork and automotive trade apprentices have fallen by a third since 2008, and technician-based trainees have lost half of their enrolments since 2012.

In 2017, total participation in apprenticeships and traineeships represented barely 2% of Australian employment. That constitutes one of the weakest rates of vocational education participation of any industrial country.

This dramatic drop in TAFE enrollment numbers, apprentices and trainees is the end-result of a failed VET system – a failure that has created a chronic skills shortage throughout Australia's manufacturing industry.

### The Reality of a Skills Shortage

The skills shortage is not merely a perceived danger; it is already being felt by employers across the nation. Survey data from NAB Australian Economics (2018) showed that 60% of employers identified a skills shortage as the primary constraint on expansion.

In 2018, the Australia Industry Group reported a doubling in the number of firms reporting skills shortages, with shortages in technicians and trades workers the most acute.

According to the Centre for Future Work, in order to sustain the emerging turnaround in manufacturing, the sector has an urgent need for a concerted and cooperative effort to strengthen the sector's vocational education and training system. To succeed, this effort will require participation by all stakeholders: government, industry, educational institutions, and unions.

## Resolving the Skills Crisis

In its report, the Centre for Future Work made 12 recommendations to help resolve the skills crisis in manufacturing, and strengthen Australia's VET system.

**1. Reestablish adequately funded and stable TAFEs as the centerpiece of vocational education.** The evidence from Australia and other countries is clear that stable, well-resourced, and publicly-accountable institutions must serve as 'anchors' at the core of the VET system, to enhance the quality and scope of training, and underpin confidence (on the part of both employers and students) in the quality of training on offer. TAFEs must be rebuilt as the major provider of core VET services; a healthy balance would see 70% of public VET funding delivered through TAFEs, rather than through private providers. Community colleges can also play an important role as anchor institutions.

**2. Develop the capacities of TAFE teachers in manufacturing fields, and invest in modern capital equipment for training.** Skills and technologies are constantly changing in real-world manufacturing, and to ensure that apprentices and graduates are capable of working with those technologies will require ongoing investments in both teacher resources and tools and capital equipment used in TAFE training.

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Only large public institutions have the capacity to invest in modern capital equipment, and utilise those resources effectively in large-scale teaching; smaller private training organisations possess neither the financial resources nor the enrolment size to justify such investments. Teachers in manufacturing-related subjects must be provided with ample opportunities for continuous upgrading, working closely with manufacturing firms to ensure that their curriculum and pedagogy reflect state-of-the-art methods and skills.

**3. Encourage partnerships on customised joint training initiatives between specific TAFEs and firms or groups of firms.** TAFEs should have the flexibility and resources required to enter into specialised partnerships with specific firms, groups of firms, or peak bodies to offer tailored vocational programs designed to meet emerging needs in the industry.

**4. Expand other forms of integrated training between VET providers and workplaces.** Employers uniformly report that VET graduates would benefit from enhanced opportunities for on-the-job experience. All VET providers (including private RTOs) should be directed to develop further opportunities for work placements, exchanges, co-op opportunities, and similar initiatives.

**5. Begin working to develop and implement higher-level and multi-disciplinary qualifications reflecting emerging skills and composite capacities.** The growing complexity and multi-dimensionality of manufacturing work, especially given the adoption of advanced manufacturing strategies by enterprises, requires manufacturing workers to be equipped with more overarching and flexible sets of skills – including technical, problem-solving, and enterprise skills. The roster of qualifications (including higher-level diploma and post-diploma certifications) needs to be expanded to reflect this trend, and the content of those offerings updated accordingly.

**6. Shift emphasis in curricula and training programs toward comprehensive and complete qualifications, rather than micro-competencies.** The undue emphasis in VET in recent years on provision of narrow, enterprise-specific micro-credentials was reinforced by the funding constraints and market-based delivery approach of Australian VET policy. Under a repaired and refunded system, main priority should be placed once again on offering complete and comprehensive qualifications, including full certificates, diplomas, and post-diplomas that permit graduates to perform the full range of tasks associated with their chosen trade or profession, and adapt flexibly to evolving requirements of modern manufacturing work.

**7. Integrate basic literacy and numeracy training into VET offerings at all levels.** Many employers report the absence of core literacy and numeracy skills to be a barrier to the employment of potential workers who otherwise possess necessary technical qualifications. Access to these foundational programs should be universally provided for those students that require them.

**8. Support the expansion of apprenticeships in manufacturing with fiscal measures, instruction resources, and mentoring.** The number of apprentices commencing positions in Australian firms, including in manufacturing, has experienced a worrisome decline. Fiscal supports for both employers and apprentices need to be expanded. Apprenticeships would be more successful, and completion rates higher, if both students and their managers and employers were supported with more intense supervision and mentoring. Group-based apprenticeship programs (to coordinate training and apprenticeships across several firms at once) would assist smaller firms in bringing on apprentices.

**9. Implement provisions ensuring access to training opportunities, and fair employment conditions for**

**trainees and apprentices, within modern awards and enterprise agreements.** Research has found that completion rates for apprentices are much higher in workplaces where decent terms and conditions for vocational education (including pay, training time, mentoring and supervision, and working hours flexibility) were specified in relevant industrial awards. Modern awards and enterprise agreements should, wherever possible, incorporate high-quality provisions and rights for workers to access VET opportunities, and combine them successfully with their continuing work responsibilities.

**10. Develop ambitious and better-resourced systems to support retraining and redeployment of displaced workers in declining manufacturing sectors.** The employment outlook for the overall manufacturing sector is brighter than it has been for over a decade. But there are still some parts of the industry experiencing downsizing and job losses. A first step in addressing emerging skills shortages in growing sub-sectors and occupations should surely be to maximise the potential for redeploying displaced skilled workers from other segments of manufacturing. Those workers could make a substantial contribution to other growing sectors, but only if their transitions are supported with consideration and resources. At present, restructuring and transition assistance is typically provided in a piecemeal and ad-hoc manner. With due attention, advance planning in

cases of looming retrenchments, and adequate resources to support retraining and relocation, the value embodied in the skills and experience of displaced workers could be retained within manufacturing.

**11. Develop new models for phased retirement to smooth the demographic transition facing skilled trade positions in manufacturing.** Another important source of potential skilled labour to help address skills shortages in certain sub-sectors and occupations is the large number of skilled workers poised for retirement in coming years. While retirement can and should be accessible to them, in many cases, senior workers may be interested in phasing in their retirement – thus allowing their skills to continue to be partially enlisted, during the transition period when scarce new workers are being trained. Similarly, senior workers could be recruited to provide ongoing mentorship and supervision roles with new apprentices, in order to improve the quality of their experience and boost completion rates (as discussed under point 8 above). Flexible experiments with these phased-in strategies should be undertaken wherever appropriate.

**12. Establish a leadership-level Manufacturing VET Policy Board to coordinate VET initiatives in the sector, and represent the interests of manufacturing in broader VET processes and dialogues.** Australia will undertake important national-

**For more information and to download a copy of The Centre for Future Work's new report, *Advanced Skills for Advanced Manufacturing: Rebuilding Vocational Training in a Transforming Industry*, visit: [https://www.futurework.org.au/advanced\\_skills\\_for\\_advanced\\_manufacturing](https://www.futurework.org.au/advanced_skills_for_advanced_manufacturing)**

level dialogues in coming years regarding the direction of VET policy, given the widespread recognition that the current model is deeply flawed and failing to meet the needs of all sectors for skilled labour.

A leadership-level policy board, incorporating all major stakeholders with an interest in manufacturing VET (including individual businesses, peak bodies, trade unions, TAFEs, other VET providers, and State and Commonwealth governments) should be established to commission further research and policy development, canvas the views of stakeholders, define a common agenda for reform – and most importantly, advocate for that agenda backed by the combined voices and influence of all participating stakeholders.

