

Process Manufacturing, Recreational Vehicle and Laboratory Industry Reference Committee

The Australian Industry and Skills Committee (AISC) commissioned the [Future Skills and Training Resource](#) which summarises data on current and future Australian and international megatrends, to support Industry Reference Committees (IRCs) in developing their Industry Skills Forecasts and Proposed Schedules of Work.

Future Skills Workshop Outcomes

The following trends and considerations are based on Process Manufacturing, Recreational Vehicle and Laboratory IRC discussions. This document presents the preliminary thinking of IRC members in order to stimulate broad discussion in industry.

The IRC welcome feedback in developing the Industry Skills Forecast.



Technology

Technology will have an extreme impact on the Process Manufacturing, Recreational Vehicle and Laboratory sectors and will change the industry sectors as they're currently known, as well as have an effect on learning and creating knowledge.

The key trends affecting the sectors are:

Artificial Intelligence (AI) and Machine Learning: AI technologies are an established trend and have been implemented across the sectors in various ways. A significant challenge is for policy and regulation to keep up with the pace of change and implementation. Industry also needs to be better at promoting the employment and skilling opportunities of technology adoption.

Cross-Disciplinary Science: This is an emerging trend requiring people and teams to have a functional knowledge across a number of disciplines.



Society and Culture

The key trends affecting the Process Manufacturing, Recreational Vehicle and Laboratory sectors are:

Changing Work and Career Values: This is an emerging trend which will become more prevalent in workplaces, particularly with technology expansion and the acceptance of automation. Workers will have the flexibility to undertake roles which interest them, and employers can also benefit from the broader perspectives gained from employees' experience in other areas. However, if workplace changes are imposed on workers, the benefits for individuals are not always positive.

Global (and Social) Mobility: Higher level skills and industry knowledge are leaving Australia to follow industry jobs moving offshore. Lower level, technical skills are required and increasingly filled by migrants, and this poses language, literacy and numeracy challenges to workplaces. Social mobility, fuelled by social media and the internet, is having a significant impact on the industry, particularly on how people are learning, and on their career and work choices.



Political and Institutional

The Process Manufacturing, Recreational Vehicle and Laboratory sectors operate in highly regulated environments, with workplaces required to adhere to stringent workplace, health and safety requirements and many workers requiring licences to undertake their job roles.

The key trends affecting the sectors are:

Political Instability and Polarisation/Political Appetite for Reform: Frequent changes in governments impact the implementation of reform agendas that are important for industry sustainability.

Governments also need to ensure funding for training is funnelled to the right skill areas so that workers can access training, particularly to meet regulatory requirements.



Resources and Environment

The key trend affecting the Process Manufacturing, Recreational Vehicle and Laboratory sectors is:

International Sustainability Action: International regulations are emerging as a key driver of change, with Australia looking to harmonise to international standards, such as those around emission targets.

More generally, resources are more widely understood and accepted as finite challenges faced by the industry, related to disposal of process waste, cost of energy use and access to ICT-related infrastructure. Younger generations are also more concerned about environmental issues, leading business and society to give more value to sustainability and the environment.



Business and Economics

The key trends affecting the Process Manufacturing, Recreational Vehicle and Laboratory sectors are:

Empowered (Informed and Demanding) Customers: Business is guided by social and cultural dynamics. Changes in consumer demands are being driven by social media movements, which will impact not only product design, but also job design.

Changing Workplace Dynamics: There is an emerging trend with teams becoming increasingly fluid in terms of sizes, interactions and tasks. The relational aspect of working together will matter more than technical aspects. A tension exists between the drive toward innovation and the need for standardisation in the manufacturing environment. 'Structured flexibility' will become prevalent in the industry.

Start Up Thinking: Australian manufacturers have a 'can do' attitude and are innovators, often requiring 'outside the box' solutions, but current systems do not always support this. Hyper-competition is driving faster product development and business cycles. Innovation is sometimes hampered by bureaucracy as well as management within organisations. Employees need to be provided with conscious opportunities to innovate, generate ideas and test designs in supportive environments.

Access to Quality Internet: This is an important requirement for every business, particularly as workforces are increasingly spread across different geographical locations.

Financial Viability: While impacted by access to and cost of resources, the key challenge for businesses in the industry sectors is to remain financially viable in order to stay competitive and continue to employ and train people.

Considerations for Training

Employers/Industry

Skills mismatch is a huge problem, and industries are running their own workshops and campaigns to attract industry entrants. However, the gap is too large for industry to address alone.

SMEs' engagement with workforce development and training remains a challenge due to market pressures.

The VET system must become more flexible to respond to industry needs; otherwise industry will go around the system.

Learners/Workers

The flexibility that now exists in mobility, social media, and connectivity needs to translate to new training models and approaches. Flexibility and higher order 'soft skills' are essential attributes now and in the future.

Learners and workers will seek to demonstrate to employers their capacity to think, try new things, and take risks. These abilities will need to be part of the training approach.

Learners and workers will combine VET and higher education alongside independent learning to gain employment or pursue entrepreneurial paths.

Government

Regulation will be a pivotal challenge to technology adoption and filling of skills gaps. Ways of evaluating progress, impact and achievement need to be reviewed.

Government involvement in all areas and aspects of the VET system will need to continue. The barriers in relation to industry having and accessing appropriate training to meet their needs requires management. This includes ensuring national and state funding skills lists accurately represent industry demand and that appropriate funding mechanisms, which reduce the cost burden on learners, are in place to enable training for these key skills.

Industry needs an active role in VET to ensure system-wide engagement.

Education and Training

Inflexibility in cross-industry training is a key issue to be addressed. Society and industry expect the VET system to focus more on industry value chains and lifecycles, and align training with new/expanding industries.

Educators' and trainers' roles are under pressure to be reconceptualised. Greater industry demand for skill sets and 'just in time' learning means these are increasingly used instead of the traditional training package model. Full qualifications as we know them have reduced relevance for employers and employees; continued support for a skills-driven training model is evident.

Registered training organisations are also impacted by financial viability and are grappling with how to deliver flexible, customised training at competitive rates to industry.

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