

Advancing manufacturing

EXPLORING THE HUMAN ELEMENT OF THE JOURNEY

Key findings from two case studies

Jobs Queensland engaged Queensland University of Technology researchers from the newly established Australian Cobotics Centre (ACC) to conduct research on progress against four key Priority Action Areas outlined in the Advancing Manufacturing Skills Strategy and illustrate that progress with two case studies.



PAA 1 | Positioning the manufacturing workforce as a key player in the journey towards Advanced Manufacturing



PAA 2 | Strengthening business capability of manufacturers



PAA 7 | Building a highly skilled, adaptable and capable existing workforce



PAA 8 | Increasing the diversity of the manufacturing workforce



Australian
Cobotics
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Key findings



Technology investment

Investment in robotics, automation and digitisation is essential to remain globally competitive. Companies that are investing are expanding into new markets, new product lines or becoming more competitive in existing niche markets.

Investing in re-skilling

Automation is changing jobs. Continued investment in skilling the current workforce, however, ensures workers can be re-deployed and maintain a career in manufacturing. Such investment must happen at both the level of the organisation and sector-wide.



Expanding skill sets

Workers with a combination of qualifications (e.g. engineering) and 'craft' skills are most in demand. By supplementing university qualifications with trade knowledge and craft skills (e.g. welding or boilermaking), designers and engineers are better able to understand problems, innovate and produce more practical solutions.

Training partnerships

Partnerships with educational institutions (e.g. schools, TAFE and universities) and professional associations are essential to building the skills required in the future workforce. These partnerships are also critical to addressing labour shortages and attracting a more diverse workforce into manufacturing.



Re-branding manufacturing work

A communication and attraction strategy is needed to promote emerging career opportunities, driven by robotics, automation and digitisation, and to re-frame negative perceptions in the labour market about manufacturing jobs.

Diversity strategies require research

The number of women in manufacturing appears to be growing and the workforce appears to be ethnically diverse (as noted by those working within it); however, increasing diversity seems to have largely occurred organically. There are few formal strategies to increase diversity and limited research on the barriers to creating a more diverse workforce. More research is required to support organisations and inform their future strategies to attract and retain workers from under-represented groups such as women, older workers, First Nations people and workers with a disability.



Leader-driven organisational change

Senior leaders play a pivotal role in shaping organisational cultures in which technology has been embraced as a means by which the organisation can innovate. The behaviour and commitment of leaders drives the 'mindset shift' that is required for workers to embrace automation and digitisation not as a threat but as an opportunity to improve the way work is done.

Capabilities for managing the external environment

Manufacturing capability can be further strengthened, developing skills in dealing with the external environment of the business. For example, managing cash flow, accessing finance and investment, making timely adoption of technology, managing digital threats such as cyber attacks, negotiating or adapting to supply chain opportunities.



Read the supporting case studies:

B&R Enclosures

Watkins Steel-Holovision