



**HAVE
YOUR
SAY**

Discussion Paper
**AN ANNUAL
TRAINING PLAN FOR
THE MANUFACTURING
INDUSTRY**

msq.org.au



**MANUFACTURING
SKILLS
QUEENSLAND**

CHIEF EXECUTIVE OFFICER'S MESSAGE

The significance of Queensland's manufacturing industry in today's global economy cannot be overstated. Almost everything we use in our daily lives—from the clothes we wear to the devices we rely on—has been created through the transformative process of manufacturing. As the industry adapts and grows, we need to ensure our investment in training and skills keeps pace, supporting manufacturers to innovate and stay competitive.

The Queensland manufacturing industry has largely recovered from the pandemic, with output returning to pre-pandemic levels. Queensland's steadfast performance reflects its strength in supply chain linkages, sector diversity, and consumer demand.

The industry is seeing signs of growth, particularly in established areas like machinery and equipment, and petrochemicals. Notably, Queensland is home to 20% of Australia's manufacturing workforce—underscoring its significant role in the nation's economy and production capabilities. Because of the industry's growth, unsurprisingly, labour supply is one of the most acute pressures on the industry, with vacancies at record levels and wages growing rapidly.

The pandemic reset our appreciation of what our local manufacturers have to offer. There's a much stronger recognition of, and value placed in, the importance of our domestic manufacturing capability. There is a promising future for Queensland manufacturing, but it requires us to take strategic, considered, and collaborative action now, to support the workforce.

Since being appointed as Chief Executive Officer of Manufacturing Skills Queensland in July 2023, I've had the privilege to travel around the state to meet with manufacturers to understand how we can work together to deliver and invest in programs that grow the industry.

To say that our manufacturing industry is impressive is an understatement. I am constantly in awe of the people who work in the industry—of their passion and ingenuity. In the face of an increasingly competitive market, changing consumer demands, and the rise of advanced technologies and automation, because of the talented workforce, Queensland's manufacturing industry continues to prove itself as a key player in the global arena.

In the face of a changing landscape, we need to work together—employers, government, unions, and training providers—to ensure that we are making the right investment and resourcing the industry with necessary training and skills to succeed into the future.

In 2024, Manufacturing Skills Queensland will release its first Annual Training Plan (ATP). The ATP will support industry to address critical skills and workforce challenges through targeted investment and training programs. To ensure that we develop an ATP that will deliver the biggest impact, we want to hear from leaders, professionals, and experts in industry—your input is vital and will help us focus our efforts.

This discussion paper has been designed to guide industry input. Through our preliminary engagement with manufacturers, we recognise opportunities around five key themes, which shape the paper:

1. Attraction and engagement
2. Transformation and leadership
3. Training, skills, and qualifications
4. The future of trades
5. Diversity in manufacturing.

You are invited to join this pivotal discussion, and guide the investment in training, skills, and workforce for the industry.

Your responses, to part or all of the discussion paper, will play a crucial role in shaping manufacturing in Queensland.



Rebecca Andrews

Chief Executive Officer
Manufacturing Skills Queensland

HAVE YOUR SAY

INFORM THE DEVELOPMENT OF THE MANUFACTURING INDUSTRY'S FIRST ANNUAL TRAINING PLAN

Manufacturing Skills Queensland welcomes input from all stakeholders involved or impacted by training, skills and workforce development —particularly from employers in the industry.

To have your say, there are three options.



1. Register to attend one of our forums

We will run in-person and online workshops for employers, and an online workshop for training organisations between February 2024 and March 2024.

To find out more and register visit go.msq.org.au/engagement



2. Complete the online survey

You can submit responses to as many of the questions in the paper as you wish. To complete a response via online survey, visit go.msq.org.au/engagement for more information.



3. Submit a response paper

We welcome papers from employers, unions, industry groups, training organisations and other stakeholders in and supporting the sector. You can email your submission to engagement@msq.org.au or send it by post to Suite 4, Level 8, 87 Wickham Terrace, Spring Hill Qld 4000.

Submissions and survey
responses close
NOON TUESDAY, 2 APRIL 2024.



THEME 1

ATTRACTION AND ENGAGEMENT

Attracting new talent, keeping the current workforce engaged

Queensland's manufacturing industry experienced a remarkable recovery during and after the pandemic. Despite the challenges posed by the global health crisis, the industry has demonstrated resilience and adaptability, resulting in significant growth in key areas.

Labour supply is one of the most pressing issues facing Queensland's manufacturing sector at present. The high number of vacancies and the escalating wages are clear indications of the growing demand for skilled workers in this industry. As employers strive to meet production targets, the competition to attract and retain qualified employees has intensified significantly.

As a result, many manufacturers report difficulty finding talent – whether new, semi-skilled, skilled or specialised. Manufacturers have implemented interstate and international recruitment strategies.

Employers often consider school-leavers as a valuable source of talent. Young individuals are often eager to learn, adaptable, and can be trained into the manufacturing industry. Queensland's manufacturing industry is highly regionalised. Providing strong local education and employment options for young people can reduce out-migration, which has many benefits.

Despite offering a wealth of opportunity and career potential, employers report that outdated and poor perception of the industry as one of the challenges impacting recruitment efforts.

In addition, a growing concern and more frequently reported challenge for manufacturers is leakage in the talent supply chain—where skilled talent changes from manufacturing to another industry. This shift not

only depletes the manufacturing sector of valuable skills but also hampers the potential for innovation and growth.

In this section we want to explore two areas—attraction and engagement, and how we can support manufacturing employers with both.

QUESTIONS THAT SUPPORT INQUIRY IN THIS FOCUS AREA INCLUDE:

1. What attracts people to work in manufacturing? Are there key attributes or demographic variables (age) that are better suited to manufacturing roles or the industry?
 2. What could industry do (or do better) to attract key cohorts (i.e. school-leavers)? Where could MSQ direct investment to support these strategies?
 3. In your opinion, are in-school and 'pathways to a trade' programs effective? What is being done well, what could be done differently?
 4. What professional development are you investing in for your employees? How does professional development contribute to your retention and succession planning? Would you like to see investment in programs that see employees build skills to become trainers or mentoring programs?
 5. What else would you like to tell us in relation to attraction and engagement?
-

THEME 2

TRANSFORMATION AND LEADERSHIP

Evolution, disruption and the implications for leadership

Industry 4.0 led to significant transformations in manufacturing through the integration of digital technologies such as Internet of Things, Artificial Intelligence (AI), and robotics, fundamentally altering how products are designed, produced, and distributed. This shift required leaders to adapt by developing new strategies for overseeing highly automated processes, managing data-driven decision-making, and fostering a workforce skilled in both technological and analytical competencies.

As businesses adopt and embed digital technology, the cyber security landscape continues to expand – becoming more complex. Added to this, leaders are also required to navigate the path to eco-friendly production, contribute to the broader goals of economic resilience and environmental stewardship as we look to a future where net zero emissions is the norm.

Queensland's manufacturing industry is still undergoing change because of Industry 4.0, while simultaneously preparing for its next horizon. These transformations are led by, and equally impact, our leaders. Designing programs that support transition, transformation and out-of-the-box thinking are essential to a globally competitive future.

The next revolution, Industry 5.0, represents an opportunity to go beyond the automation and efficiency focus of Industry 4.0. It emphasises the integration of human creativity and craftsmanship with advanced technologies to create more personalised, sustainable, and socially responsible manufacturing processes. This has significant implications for leaders in manufacturing—it means a shift towards valuing human-centric approaches alongside technological advancements, where the role of workers evolves to complement machines through tasks that require creativity, empathy, and complex problem-solving.

In this section we want to explore challenges of leadership, and how skills and training responses can better support leaders manage change, lead transformation, and stay globally competitive.

QUESTIONS THAT SUPPORT INQUIRY IN THIS FOCUS AREA INCLUDE:

1. What skills, knowledge and key attributes will be important for the leaders of the future?
 2. What are some of the biggest challenges and opportunities for leaders in manufacturing right now?
 3. What broad skills requirements are impacting leaders today? Are any of the following areas relevant:
 - Strategy and leadership
 - Net zero
 - Cybersecurity
 - Innovation
 - Industry 4.0 concepts
 - Industry 5.0 concepts
 - Other, please let us know.
 4. What strategies or training can we put in place to support career progression for leaders in manufacturing industries?
 5. What else would you like to tell us in relation to transformation and leadership?
-

THEME 3

TRAINING, SKILLS, AND QUALIFICATIONS

Effectiveness of the training system

Skills underpin the success of the manufacturing workforce by directly influencing productivity, innovation, and competitiveness within the sector. A skilled workforce is capable of efficiently operating advanced machinery, implementing new technologies, and optimising production processes, which are crucial for maintaining high-quality output and meeting market demands.

The training sector offers a wide array of options for upskilling manufacturers, catering to the diverse needs of the workforce. Traditional 'classroom-based' learning is complemented by online courses and on-the-job training. Customised training programs, designed in collaboration with industry partners, ensure that the skills taught are directly applicable to current industry challenges and technologies. Apprenticeship and mentorship programs provide hands-on experience and knowledge transfer from seasoned professionals, fostering a culture of continuous learning and skill development within the manufacturing sector. Recognised prior learning ideally enables skilled workers the ability to gain a qualification without the time involved in training. Non-accredited training options are becoming increasingly popular to provide agile or just-in-time knowledge and skills.

Although there is general satisfaction with elements of the training sector, there's often commentary that current methods required improvement. Concerns with the training sector may include ensuring the training programs are adequate to meet the specific needs of different roles, access, and availability, keeping up with industry advancements, and speed in delivery of training programs.

In this section, we would like to explore general usage of the system, what is working well for manufacturers and what needs improvement. We would also like to explore areas where we can invest to create responsive options for employers.

QUESTIONS THAT SUPPORT INQUIRY IN THIS FOCUS AREA INCLUDE:

1. How is the training system responding to the current and emerging needs of the manufacturing industry? What is working well? Where are the opportunities?
 2. What training programs are currently being used by your place of work/industry (apprenticeships, non-accredited training)? What, if any, are the barriers for employers to implement a training program in the workplace (i.e. cost, availability etc.)?
 3. Are the mechanisms for recognising prior learning and experience being used effectively? Where are the opportunities and challenges?
 4. Is there a place for non-accredited training to support manufacturing businesses? Which areas would employers see benefit in using non-accredited training?
 5. What are the most relevant qualifications to the manufacturing industry right now?
 6. What else would you like to tell us in relation to the training, skills and qualifications in relation to manufacturing?
-

THEME 4

ADVANCEMENT AND THE FUTURE

The future of trades and manufacturing

Technology has been a driving force in the transformation of the manufacturing sector, revolutionising traditional methods and paving the way for increased efficiency and productivity. Automation, robotics, and artificial intelligence have played pivotal roles in streamlining manufacturing processes, reducing human error, and optimising production.

The future of manufacturing is marked by both promising opportunities and challenges driven by key trends including Industry 4.0, sustainability, supply chain management, digital transformation, use of big data, and more. These changes redefine how we think about operations across the full spectrum of manufacturing industries, and the future demands we will need to make of our workforce.

The manufacturing industry has evolved significantly over the past decade, leading to the creation of new positions that reflect advancements in technology and shifts in consumer demand. Positions like sustainability specialists, renewables technicians, and advanced robotics technicians are just some of the positions created in response to industry changes.

In this section, we want to explore the future of manufacturing from your perspective. Consider the new skills we will need, and what new positions will need to be created to support your industry.

QUESTIONS THAT SUPPORT INQUIRY IN THIS FOCUS AREA INCLUDE:

1. In your view, what are the emerging developments and trends in the manufacturing sector and how will these impact the future workforce?
 2. Are there any specific new or niche skills and capability requirements emerging with the introduction of new technologies, consumer demand, or other megatrends?
 3. How can we invest in new skills to drive innovation and build Queensland's competitive advantage?
 4. What else would you like to tell us in relation to the future of manufacturing?
-

THEME 5

DIVERSITY IN MANUFACTURING

Embedding resilience and best practice for creativity and innovation

Diversity in the workplace means employing people from a wide range of characteristics, experiences, and backgrounds. A growing body of research shows that organisations that build a diverse workforce experience greater creativity and innovation and are likely to experience stronger financial returns than those that don't. It doesn't just make sense in business terms but promotes community values and social justice.

As a result of the global pandemic, a skilled labour shortage prompted employers to look at employment strategies targeting less traditional employee types. This was both beneficial to the sector and priority cohorts. Employers that did successfully develop and deploy these strategies reported that it was a valuable learning opportunity, which brought fresh perspectives, skills, and creativity into their workforce.

There's an opportunity to influence more systemic change, and to keep these valuable learnings and strategies in place, even as we navigate changes in the availability of labour.

First Nations

Representation of First Nations peoples in manufacturing in Queensland has increased by 27.4% in the five years from 2016 to 2021. Although there is still work to be done, this is positive, not only for the individuals involved, but also for the community.

Women in non-traditional trades

The gender composition of Queensland manufacturing has improved in the last decade. In mid-2022 we saw an increase in the number of female workers: from around 23% to as high as 28%. However, by the middle of 2023 this had fallen to 25%. Despite some improvement, the female share of the workforce in Queensland remains below the national average.

Migrants and refugees

Increasingly, we are hearing from manufacturing employers that the necessary skills aren't always available in Australia, and that recruitment strategies are being designed to attract global talent. In fact, 32.3% of manufacturing employees in Queensland were not born in Australia. Despite this high number, discrimination, language, recognition of overseas qualifications, and work experience are common barriers that make it difficult for migrants and refugees looking for long-term employment.

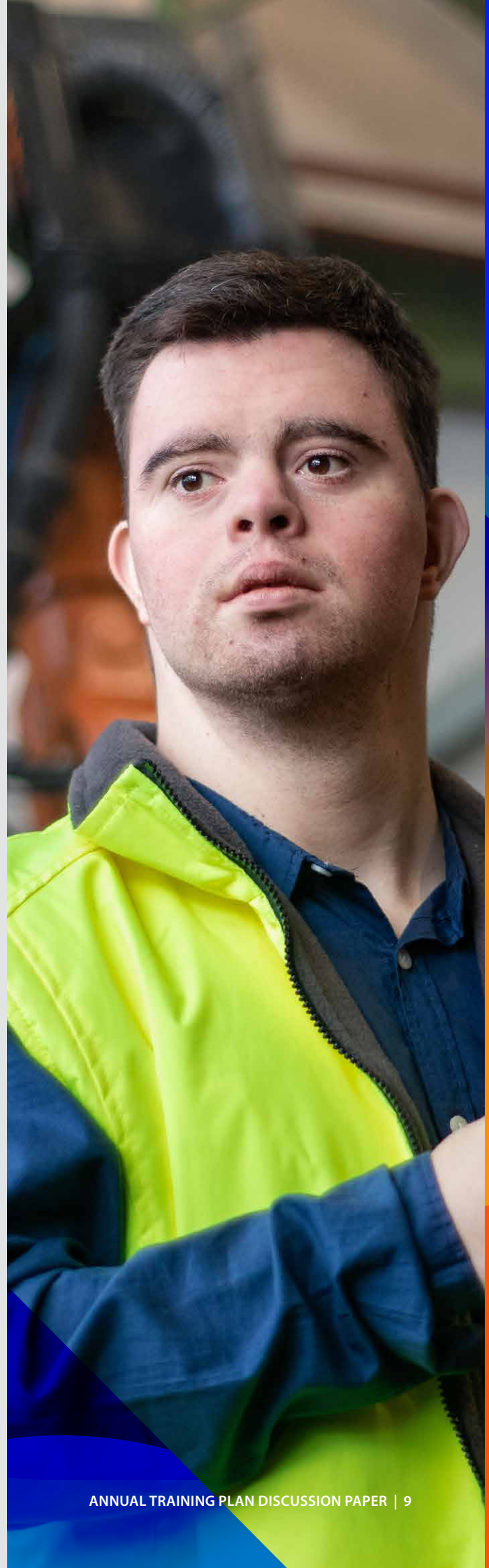
People with disability

People with disabilities are under-represented in the manufacturing industry, reflecting broader employment challenges faced by this group across various industries. Now more than ever, people want to work where their contributions are valued. Despite advancements in inclusivity and accessibility, barriers such as inadequate workplace accommodations and prevailing biases continue to hinder the full participation of individuals with disabilities.

In this section we want to explore the concept of diversity in the workplace, its value to manufacturers and how we can support through investment and program design.

QUESTIONS THAT SUPPORT INQUIRY IN THIS FOCUS AREA INCLUDE:

1. What factors influence workforce participation for priority cohorts?
 2. In your opinion, what are the enablers and barriers to support the development of a diverse workforce in the sector?
 3. What programs or initiatives have you observed that have successfully delivered results?
 4. Which of the following basic initiatives would you like to see invested in:
 - Scholarships for priority cohorts
 - Mentoring programs
 - Industry-specific diversity training for employees
 - Industry-specific diversity training for leaders
 - Workplace diversity consultations or needs analysis.
 5. What else would you like to tell us in relation to diversity in manufacturing?
-





OTHER INSIGHTS

If, after reading through the paper, you have thoughts on an area we haven't covered, you are welcome to share them.

- 1.** Are there innovative practices, models, or case studies you would like to highlight?
- 2.** In your opinion, what areas should we invest in as a priority?
- 3.** Further to the information you've provided, are there any other insights you would like to provide?
- 4.** Other feedback, thoughts and suggestions related to training, skills and workforce.



msq.org.au

