The future of workforce learning and human capital trends: How South Metropolitan TAFE is responding
SM TAFE

Snapshot:
➢ 12 Campuses
➢ 1,380 staff
➢ 376 VET qualifications
➢ 27,000 students
➢ Over 1,100 international students
➢ Over 400 industry and community partners
➢ 34% of all WA TAFE enrolments (2017)
➢ 38% of all WA Apprentice enrolment (2017)
Industry Training Areas

AUTOMOTIVE

AVIATION

ENGINEERING

MARITIME

BUSINESS & IT

HOSPITALITY & TOURISM

CONSTRUCTION

HEALTH

COMMUNITY SERVICES

ANIMAL STUDIES

FASHION

BEAUTY

SCIENCE & ENVIRONMENT

AUSTRALIAN CENTRE FOR ENERGY & PROCESS TRAINING
Specialist Areas

APPLIED ENGINEERING

AUTOMOTIVE

DEFENCE

ENERGY PROCESSING

AEROSPACE

HEATING VENTILATION AND AIR CONDITIONING

MARITIME
Battery supply chain
A new Way for WA to capture more value in the growing supply chain for lithium batteries

Powered by hydrogen
A new Way to decarbonise the world’s industrial, transport and energy sectors

Indigenous-owned business
A new Way to build a foundation for Indigenous-owned business

Biodiversity products
A new Way to commercialise products from our unique biodiversity

Our place in space
A new Way for WA to play a leading role in the new space race

Indian Ocean defence
A new Way to think about trade and security operations and the role WA should play

Industry education
A new Way to provide applied industry experience to the world’s leading students through micro-credentialing

Digital operations
A new Way to capitalise on the technological legacy of the resources boom through application to other sectors

Integrated energy solutions
A new Way to deliver bespoke energy solutions, matching local energy sources with community needs
Skilling for the future

- **2018**: Cybersecurity, Automation, Digital shipyard - Welding
- **2019**: Industry 4.0 / Dip Applied Technologies, Future Batteries
- **2020**: Space Technology, Defence Industry Workforce Development
Cybersecurity

• Collaborated with Boxhill and AustCyber
• Training Cyber Security Operations Centre (TCSOC) opened on the Murdoch Campus in May 2019.
• The TCSOC offers Certificate III and Certificate IV in Cybersecurity.
The University of Western Australia (UWA) has partnered with SM TAFE for the Liquefied Natural Gas Industry 4.0 Testlab proposal. The expected long term benefits to SM TAFE and the broader community would include:

- Early evaluation of the impact of Industry 4.0 on manufacturing and business models.
- Allow employers and trainers to better understand the jobs of the future and the skills required to do them.
- Assist in the development of education and training programs related to general Industry 4.0 theory.
- Skills and knowledge around interoperability competence will be built up in working alongside companies and industry in real-world applications of Industry 4.0.
Future Battery Industry - National

- Future Battery Industries Cooperative Research Centre initiative – a collaboration of 58 industry, government and research partners led by Curtin University.
  - Six-year, $135 million national research hub supported by Commonwealth and WA Governments and industry – announced in April 2019.
  - SM TAFE’s role in the CRC is to develop a workforce development strategy that addresses current and future training needs of the battery industry and lead its implementation.
Future Battery Industry Strategy is aimed at achieving, by 2025, a value-adding battery industry in WA that provides local jobs, develops skills, diversifies the economy and benefits the regions.

Under the WA strategy, SM TAFE will conduct a training needs analysis for current battery value chain activities and work with DTWD to recommend a workforce development strategy.
Submarine Training & Systems Centre (STSC)
Tangible Outcomes

- Over RAN 60 courses delivered - Individual & team training
- 80 – 100 qualified submariners per year
- Only submarine school in Australia
- Training technology leaders in RAN
- Award winning simulations
1. Supporting a Strong and Enduring Defence Presence
2. Growing the State’s Defence Industry Capability and Contribution
3. Developing Strategic Infrastructure
4. Building Research and Innovation Partnerships
5. Advancing Education, Training and Skilling
6. Supporting Veterans and Families
WA Defence Industry workforce requirements

WA Education and Training sector’s skilling capacity

WA Defence Industry Workforce Development Plan
The journey for skills in an automated environment

- Entry level program (VETiS and Existing Workers)
  - Certificate II
- Micro-credential (existing workers)
  - Understand Automation and Work in an Automated Environment
- Certificate IV in Control Centre Operations
  - Foundation and Specialised Pathways
Rio Tinto – Automation

- Rio Tinto, in partnership with SM TAFE are working together in an Australian first, to develop new automation curriculum and educational pathways to meet critical skill needs.
- Nationally accredited automation courses co-designed and produced are:
  - Certificate II in Automation for Operators and VET in School
  - Micro Credential Working in an Automated Workplace for Apprentice, Trade Qualified and experienced workers; and
  - Certificate IV in Remote Centre Operations for Controllers
Entry Level - Autonomous Workplace Operations

- Skills and knowledge to work within an automated environment

- Year 11/12 student
- Existing Worker
- New Entrant
Micro-credential to Work Effectively in an Automated Workplace

Apprentices
Trade
Qualified
Technically qualified or experienced workers

Skills and Knowledge to work and use data in an automated workplace
Control Centre Operations

Existing or Aspiring Operations Centre Controller

• Skills and knowledge required to be a competent controller within a remote operations centre