

INDUSTRY CAPABILITY DEVELOPMENT

Under the leadership of the Defence Materials Technology Centre (DMTC), the Industry Capability Development Program aims to create a network of 'Defence-ready' companies with benchmarked, globally competitive capabilities.

DMTC was established to provide support for future defence manufacturing and technology solutions for Australia. DMTC has a strong focus on engaging small to medium enterprises (SMEs) in its research and development activities and equipping them to participate in prime contractors' supply chains.

Participants in DMTC's Industry Capability Development Program gain exposure to innovative technologies, best practice techniques and processes and insights into quality, safety and certification standards expected by Defence. The multi-phase DMTC program involves process benchmarking and technology transfer activities in partnership with Universities and government research agencies and with support from the Centre for Defence Industry Capability (CDIC) and relevant certification partners.

The Program is focused on building capacity and opening doors to opportunities in the Defence sector. It also provides mentoring and evidence-based feedback on what SMEs need to do to lift themselves up the skills curve. Building on previous capacity-building successes in areas such as CNC machining and additive manufacturing (3D printing), current efforts focus on enhancing Australian industry's welding capabilities.

DMTC's activities focus on development of industry capability, rather than a specific product. As such, platform independent activities (such as welding productivity improvements) can be addressed independently of design or prime contractor selection, by focusing on supply chain improvements and setting context through global best practice benchmarks, standards and quality frameworks.

Next steps

Discussions are currently underway with the respective State Governments for similar programs in Tasmania, South Australia and other Queensland regions.

DMTC is also planning to expand the Program to address other specific manufacturing technologies to enhance Australian industrial capability. Some examples include additive manufacturing and casting techniques, along with technologies critical to the digitalisation of manufacturing.



PILOT PROJECTS UNDERWAY

DMTC has been collaborating with the Latrobe City Council since 2015 to boost the capabilities of selected SMEs in the Latrobe Valley.

The DMTC team (comprising a program leader from DMTC and researchers from the University of Wollongong and Swinburne University of Technology) has been working with these SMEs - and more recently with companies in the Illawarra (NSW) and Mackay (Qld) regions - on welding techniques and technologies, specifically to enhance capabilities in the welding of high-strength steels.

All participating companies successfully demonstrated capabilities aligned to relevant welding standards, and opportunities for further improvement were discussed with each of the companies.

While these pilot programs have focused on the welding of high-strength steels for maritime platforms, the technologies are also applicable to land platforms.

The outcomes achieved for companies participating in the Latrobe, Illawarra and Mackay pilots included:

- education on the latest techniques and processes in welding high strength steels
- information on the international standards and processes required for the defence sector
- information to the latest automated welding techniques and equipment
- recommended pathways to welding practice improvement, and
- opportunities to network and collaborate to establish a critical mass of regional capability.

“Companies have really embraced the opportunity – some have even agreed to join forces to offer a cluster of regional capability. It’s a big thing for companies that normally compete in the marketplace to agree that in the defence space they want to work together, but this kind of program led by DMTC shows it is possible.”

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