



Supporting future talent

I have recently had the privilege of writing letters of support for two DMTC researchers who are vying for prestigious Early Career Researcher awards. With both awards to be decided between now and Christmas, we will hopefully have good news to share with you soon.

As a not-for-profit public company, DMTC exists to build and exploit extensive expertise and intellectual property in Australia's defence and national security sectors. One way we achieve this is through identifying and sponsoring future research and industry leaders, who are integral to our project teams.

Working with our university partners and research institutions, [DMTC's Education Program](#) offers full, half and top-up Masters and PhD scholarships to students at partner universities based on alignment with future defence capability requirements and industrial priorities.

It's been great to see, since 2008, more than 40 postgraduate candidates supported through scholarships and access to professional development courses. One of these professional development events is happening in September, and our annual Student Conference will be held in mid-November.

It has also been encouraging to see a number of these researchers successfully transition into postdoctoral research roles and full-time employment in defence or related sectors. In several cases, our young researchers have also pursued opportunities to commercialise new technologies.

This is a great credit to them and their entrepreneurial spirit, but also proves DMTC's value as a successful technology development ecosystem.

On another note, I want to acknowledge all of the people who attended our Annual Conference in March and who completed the conference survey. The survey data and all of your comments are being used to inform our planning for our next conference in 2018. We will be in touch soon with dates and other important preliminary details for our 2018 conference.

Dr Mark Hodge
DMTC CEO

Global spotlight on high altitude sensor systems



This year's International Astronautical Conference will be held in Australia for only the second time since its establishment in the 1950s, and is expected to attract as many as 4,000 delegates to South Australia.

Running from 25 to 29 September, the event will be an unparalleled opportunity for the Australian space sector and local aerospace engineering professionals to engage with international delegates.

The Australian Government will be represented at the event's trade exhibition and throughout the conference agenda.

DMTC High Altitude Sensor Systems (HASS) Program Leader Kimberley Clayfield will be one of the keynote speakers on Day Two of the conference. It will be a homecoming of sorts for Dr Clayfield, who is a graduate of the University of Adelaide.

Research partner CSIRO has provided \$2.7 million in seed funding to establish the HASS Program through DMTC.

The Program aims to enhance national defence capabilities and build Australian industrial capability in sensor and on-board data processing technology for unmanned aerial systems and small-satellite platforms. It is currently in the start-up phase, with initial projects to be announced soon.

Benchmarking SMEs for 'Defence-readiness'



Pictured: Participants of an Industry Capability Development pilot project in Mackay, Queensland.

After the success of DMTC's pilot projects in benchmarking, planning is underway for benchmarking of other manufacturing techniques and technologies such as corrosion management and additive manufacturing (AM).

To date, welding benchmarking activities have been conducted in the Latrobe Valley, the Illawarra and Mackay regions. While these pilot programs have been directed at the welding of high strength steels for maritime platforms, the outcomes are also applicable to land platforms.

DMTC's Industry Capability Development Program aims to create a network of 'Defence-ready' companies with benchmarked, globally competitive capabilities.

Participating companies gain exposure to the latest techniques and equipment used in engineering and manufacturing, and insights into quality, safety and certification standards required within defence supply chains.

Targeted at small businesses, the program involves benchmarking and technology transfer in partnership with universities and government research agencies, with support from the Centre for Defence Industry Capability (CDIC) and relevant certification partners.

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

RMIT experts join DMTC Air Program



Pictured: RMIT's Dr Maciej Mazur is an expert in AM.

Research partner [RMIT](#) has bolstered its contribution to [DMTC's Air Program](#) through the addition of aerospace engineering and AM expertise.

Dr Maciej Mazur and Associate Professor Songlin Ding from RMIT's School of Engineering have recently joined projects in DMTC's Air Program.

DMTC Chief Technology Officer Matt Dargusch welcomed the new project team members.

"The research expertise across the DMTC community is already broad, and I'm confident that the experience and expertise that Songlin and Maciej bring, will only add to that," Professor Dargusch said.

"The work we are doing in the Air Program, particularly in relation to advancing repair technologies, has significant potential to deliver positive outcomes for Australia's fifth generation Air Force and to continue to build Australia's manufacturing and industrial base."

Dr Mazur from the RMIT Centre for Additive Manufacturing (RCAM) has been involved in research projects focusing on design for AM and optimisation of mechanical systems since 2013.

His recent work has addressed challenges associated with the application of AM techniques to a range of manufacturing techniques including cellular materials, injection mould tooling and fluid flow devices, for a range of industrial uses.

'Walk before you run': a better approach to program design

An enhanced approach to program development in DMTC is resulting in smarter engagement with prospective industry and research partners, faster transition from development to implementation and more strategic deployment of resources.

Outlined at DMTC's annual conference in March, the more rigorous approach was successfully implemented in a project recently completed within [DMTC's Sea Program](#).

[Swinburne University of Technology](#) and Adelaide-based company [Airspeed](#) conducted a scoping review on the effect of impact resistance on the durability of composite structures in the marine environment.

The project team scrutinised existing academic literature along with existing technical solutions, and went on to benchmark current Australian industry capability and identify prospective industry and research partners that could be involved in follow-on projects.

DMTC's Sea Program Leader, Associate Professor Stephen van Duin, is upbeat about the results.

“Defence projects are often described as a long game, but it’s also true that the early phases of a program or project are often the most critical to long-term success,” he said.

As DMTC’s Lead Program Manager Deepak Ganga explains, scoping and de-risking activities like this one with Swinburne and Airspeed are all about helping the DMTC Management Team and Board to make better decisions.

“There will be times when these early investigations lead us to decide not to pursue new projects. That’s actually a successful outcome in terms of avoiding wasted effort or misdirected investments,” he says.

“In this case, we’ve spent five or six months making sure we have a really good understanding of the technical risks and opportunities, which will help us as we move forward.”

Read more: <http://dmtc.com.au/news/managing-risk-making-better-decisions-tech-development-programs/>

Healthy result on business excellence



DMTC is proud to announce it has achieved an outstanding result in its Supplier Continuous Improvement Program (SCIP) recently.

Under the SCIP program, DMTC conducts annual Business Excellence self-assessments as a ‘health-check’ and as a way to strategically review the organisation and identify improvement opportunities.

In 2017, DMTC again performed strongly, achieving its highest self-assessment score to date and confirming its commitment to embedding continuous improvement.

“We couldn’t have achieved this without disciplined project management and the involvement of all of our industry and research partners,” said Mr Miles Kenyon, DMTC Program Development Manager. He said a 12-month action plan was in place to keep DMTC on the path to improvement. The SCIP program is administered by the [Centre for Defence Industry Capability \(CDIC\)](#).

DMTC was established and is supported by the Australian Government's
Defence Future Capability Technology Centre (DFCTC) initiative.

Visit us online www.dmtc.com.au

Ph. (03) 9214 4447