

Hon Steven Marshall MP Premier

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Defence research projects receive funding injection

A new virtual reality tool that manipulates digital human mannequins to address the unique ergonomic challenges posed by military vessels is one of five cutting-edge ventures to receive funding as part of the latest round of grants from the Defence Innovation Partnership's Collaborative Research Fund (CRF).

The University of South Australia, with partners The University of Adelaide and Kadego-Cadgile, will develop the VR tool, which will enable the easy and effective assessment of designs for complex, high risk environments, including submarines.

Announcing this year's recipients, Premier Steven Marshall said the CRF was proving to be an important gateway to successful partnerships between industry, academia and Defence.

"To date, the Collaborative Research Fund has provided almost \$3 million to 20 South Australian-based projects from a range of disciplines," Premier Marshall said.

"A number of these projects have gone on to secure additional funding from other sources, including the Defence Innovation Hub, to continue their important work.

"These additional five projects from this year's round of funding all have the potential to greatly benefit Australia's Defence Force capability.

"What's also exciting is this research can also improve outcomes for people working in a range of industries including mining and space."

The University of South Australia's Dr Peter Schumacher who heads up the Studio for Complex Human Environment Design, in The Australian Centre for Interactive and Virtual Environments, where the virtual reality project will be based, said there is strong interest from industry in the technology.

"Industrial partners have expressed a strong interest for integrated digital design assessment tools that enable anthropometric assessment in the design process," Dr Schumacher said.

"South Australia is home to a unique pool of collaborative expertise in integrated and virtual environments (University of South Australia), biomechanics and human modelling (University of South Australia and University of Adelaide), and virtual reality software development (Kadego-Cadgile). In addition, the main industrial partners in Lockheed Martin and Saab Australia, have a local presence in the state. This project will support this great South Australian ecosystem."

The full list of projects to receive funding are:

- \$149,894 for a **virtual reality tool to manipulate digital human mannequins for evaluating ergonomics and human factors**, led by the University of South Australia with partners the University of Adelaide and Kadego Engineering Pty Ltd
- \$149,957 for a **framework for addressing design challenges in wargames**, led by Flinders University with partners the Department of Defence, University of Adelaide, University of NSW and DEWC Systems Pty Ltd
- \$150,000 for **deep sensing: machine learning enhanced optical fibre hydrophone**, led by the University of South Australia with partners the University of Adelaide, Acacia Systems Pty Ltd and Arkwright Technologies Pty Ltd
- \$149,999 for **developing neuroscience-based approaches to assessing and enhancing human cognitive performance in challenging operational environments**, led by Flinders University with partners the University of South Australia, Technology for Education Solutions Pty Ltd, Department of Defence (Army) and Department of Defence (Defence Science and Technology Group)
- \$150,000 for **advancing SOCRETIS (SOCial REasoning Tool and Interactive System): an AI-enabled collaborative reasoning aid for the information environment**, led by the University of Adelaide with partners Insight Via Artificial Intelligence Pty Ltd, University of South Australia and the Department of Defence.

The Defence Innovation Partnership is a collaborative venture between the South Australian Government, the Department of Defence through the Next Generation Technologies Fund, and South Australia's three universities – the University of Adelaide, Flinders University and the University of South Australia.

For more information on the CRF visit www.defenceinnovationpartnership.com