

Tactical Research Unit Prospectus

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Executive Summary

The Tactical Research Unit (TRU) at Bond University works towards the protection and performance of individuals on the front line who protect our community and country.

The TRU is a network of multidisciplinary international experts who investigate ways to optimise the physical and cognitive capabilities, and safety of tactical personnel - whether military, law enforcement, firefighters, or first responder organisations. It is a part of Bond University's Faculty of Health Sciences & Medicine, which received the highest possible ranking of 'well above world standard', and 'at world standard' for human movement and sports science, from the Australian Research Council (ARC) in its Excellence in Research for Australia (ERA) 2015 results.

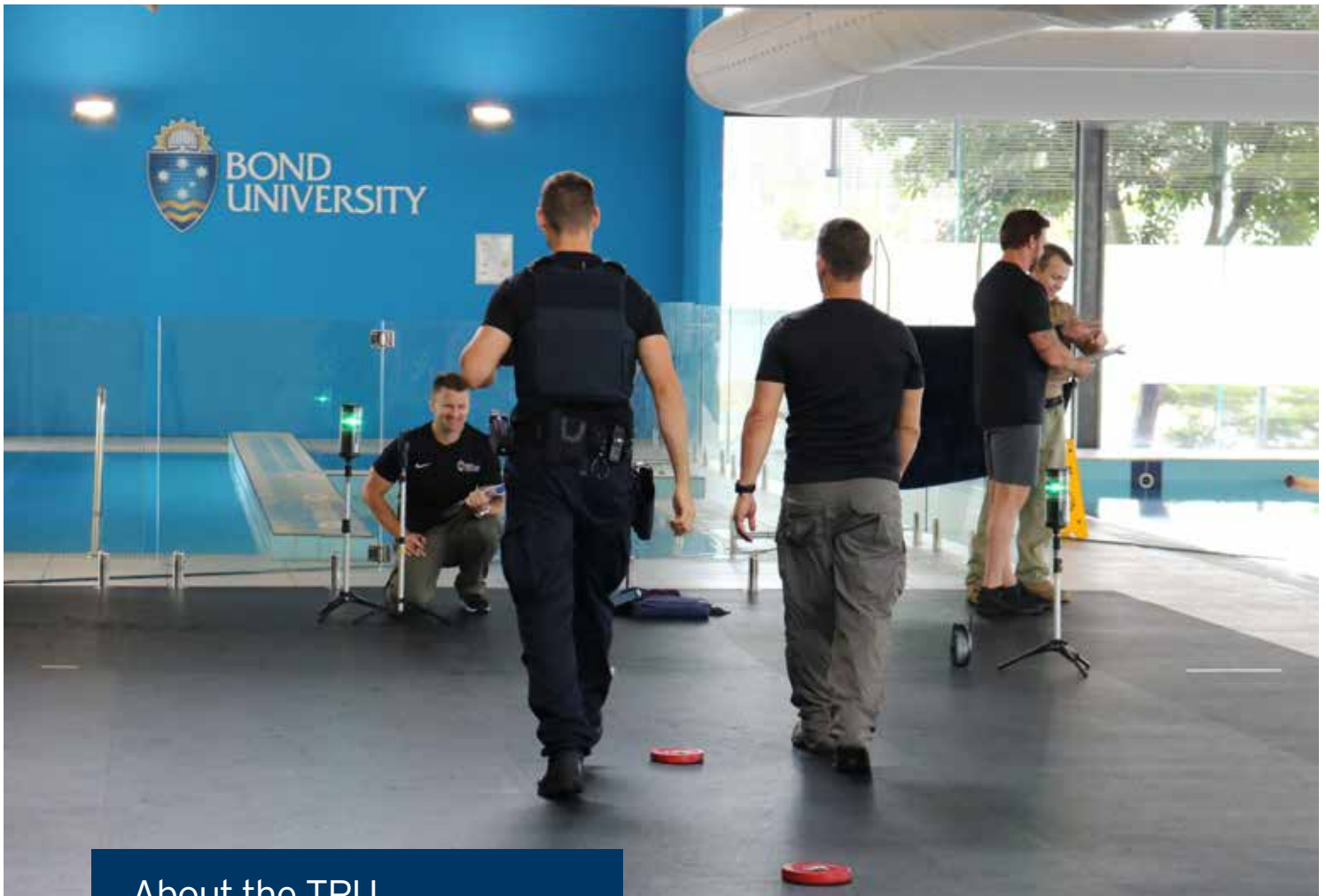
The overarching aim of the group is to improve the wellbeing and occupational performance of those who serve and ensure new research findings are shared across the different tactical populations.

MISSION

To enhance the protection and performance of tactical personnel through pragmatic research, education and advice.

VISION

Excellence in research that will lead to improvements in the health, wellbeing and occupational performance of tactical personnel.



About the TRU

The TRU is unique and purpose built, and as such bring several key strengths to tactical research:

- TRU members have a unique blend of tactical and research experience with all members of the unit having served within, or worked directly for, tactical organisations.
- All lead TRU members have, or have had, a security clearance and as such ensure data is treated securely and with relative sensitivity. Where security clearances are required, the level of work can be completed from Baseline Vetting through to Negative Vetting Level 2.
- The TRU does not seek out organisations to complete research but works with organisations to meet their research needs and demands.
- The TRU research outcomes are based on practical and realistic approaches, with the focus being on useable research dissemination as opposed to chasing journal publications and to this end, the TRU produce grey literature reports, that meet the requirements of the organisation.
- With a wide array of tactical experience across the three management levels (tactical, operational and strategic) and research across the tactical spectrum from recruiting through to specialist, the TRU team bring lessons learnt from tactical organisations to better optimise organisational outcomes.
- Being from tactical backgrounds the TRU team are task focused. With multiple consultancy and research grant projects spanning over \$700k in 2017 - 2018 alone, the TRU have finished all projects on budget, and more importantly, on time.

The generic scope of the TRU includes, but is not limited to;

- Occupational task analysis
- Fitness standard validation
- Physiological and musculoskeletal profiling and fitness screening
- Physical capability and task performance evaluation
- Injury epidemiology
- Injury risk identification, minimisation and mitigation
- Equipment to human integration and impact assessments
- Thermal and hydration research
- Physical conditioning reviews
- Physical conditioning program development
- Tactical performance, health, fitness and wellbeing
- Operational protocols and strategic guidance

“There is a notable gap in research around the health and safety of all tactical personnel as a collective, with a key problem being that much of the research conducted is siloed within each of the different forces and services.”

Dr Rob Orr
Associate Professor, Bond University



Our Staff



DR ROB ORR - LEAD, TRU

Dr Orr leads the team and brings over 20 years' military experience to the TRU, having served in the Australian Regular Army for over two decades as an infantry soldier, physical training instructor, physiotherapist and human performance officer.

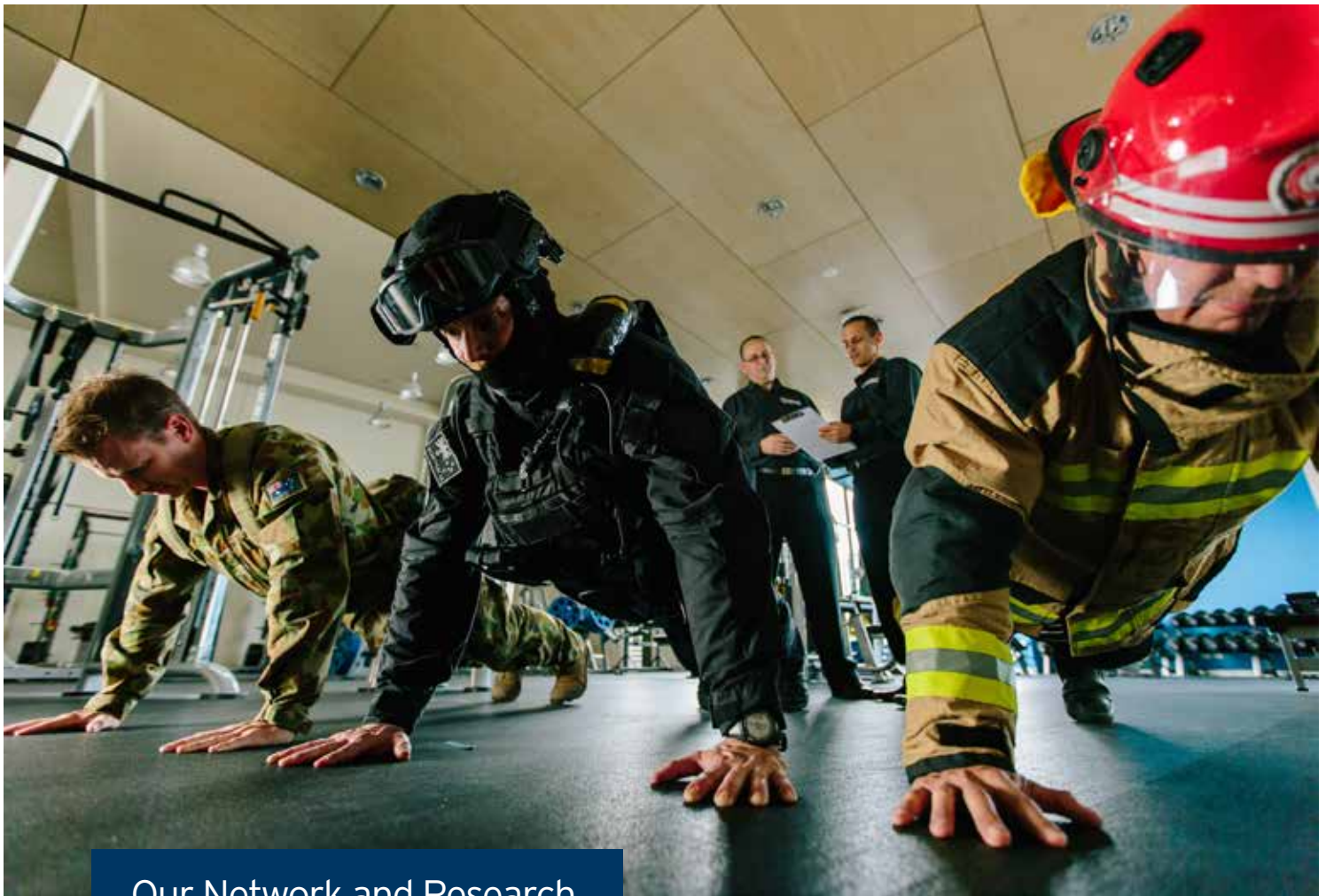
Joining Bond University in 2012, his teaching focuses on maximising human potential while his research looks at the tactical strength and conditioning of military, police and firefighters from initial trainees through to elite specialists.



DR BEN SCHRAM - RESEARCH COORDINATOR

Dr Schram has experienced officer training during his time with the Australian Army Reserve while completing a Bachelor of Exercise Science, Doctor of Physiotherapy and finally a PhD. He has been a member of the TRU since 2015 where he now is the Research and Data Coordinator for all tactical projects.

Tactical research interests include deconstructing the metabolic and musculoskeletal requirements of occupational tasks, validating training and assessment protocols and developing injury minimisation strategies in populations such as Defence, Fire and Police Departments.



Our Network and Research

OUR NETWORK CONSISTS OF:

- Exercise physiologists
- Injury epidemiologists
- National and international fire and rescue personnel
- National and international law enforcement personnel
- National and international military personnel
- Nutritionists
- Physiotherapists
- Psychologists
- Thermal physiologists

RESEARCH AND CONSULTANCIES

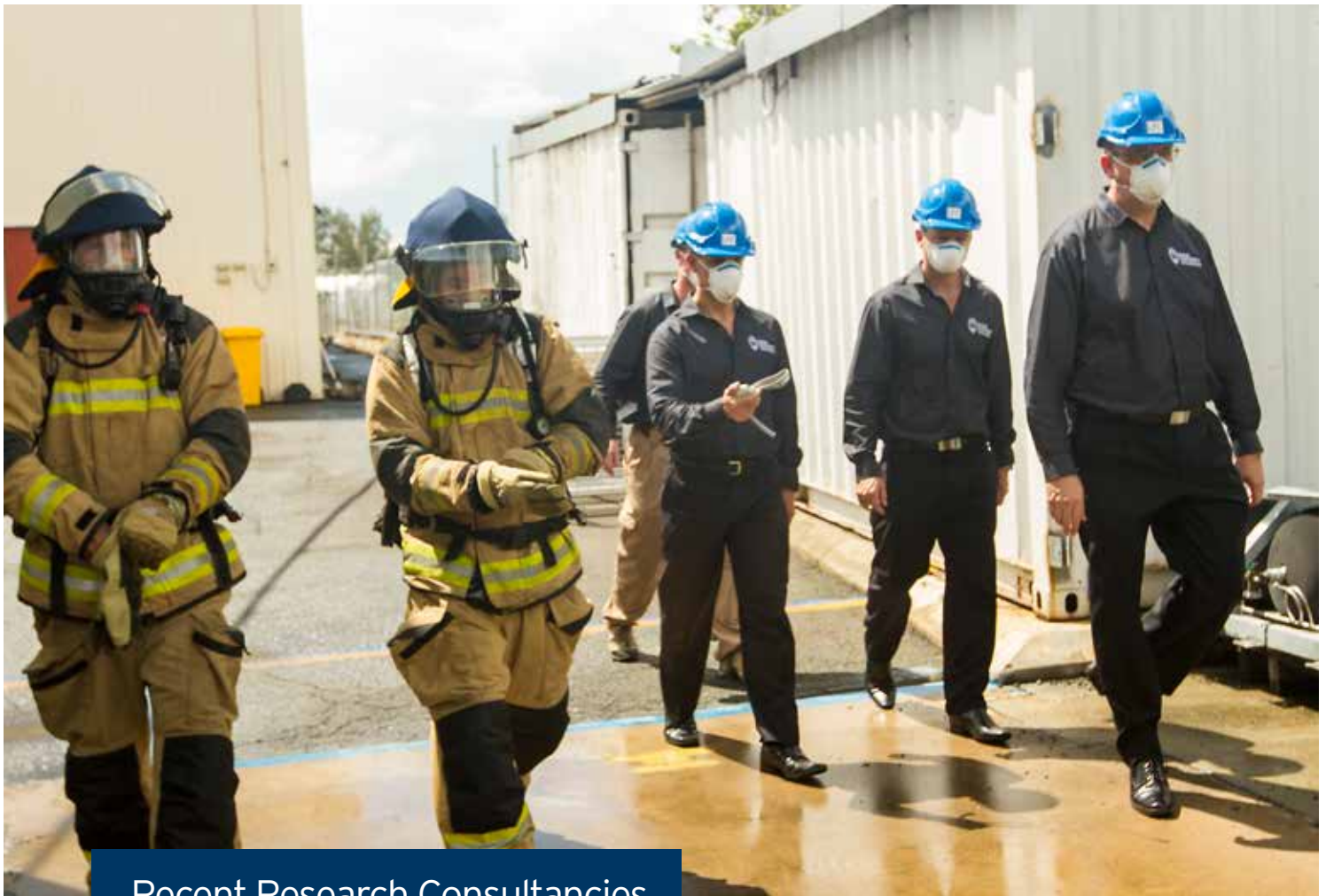
With many TRU personnel and collaborators having served in a tactical population, the TRU appreciates the need for research to be pragmatic and able to be translated to practice in the real world. Furthermore, the TRU acknowledges that, typically, when industry or organisations need the information provided by the research, they need it quickly. To meet this need, the TRU have the capability to stand up research capabilities for small through to large scale projects to make sure the research is fast, but not rushed.

THE PERFECT TRINITY

With experience in tactical service, members of the team have experienced first hand disconnects between research, industry and tactical organisations. On this basis, wherever viable, the TRU engages with both industry and tactical organisations in order to ensure downstream recommendations have the greatest chance of effective implementations and that the outcomes are relevant to both industry and the organisations involved.

International Research Collaborations





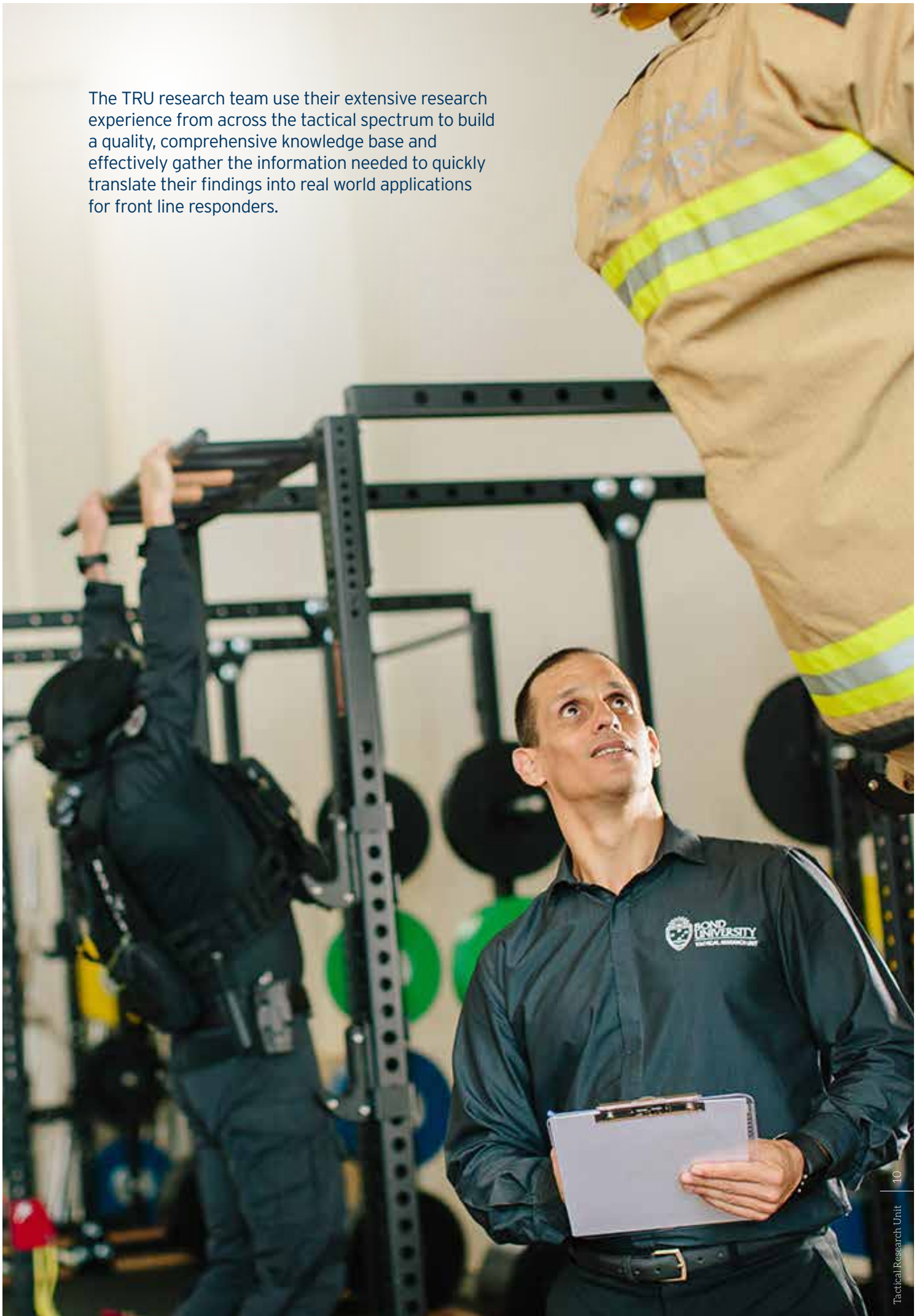
Recent Research Consultancies

Through dedicated and reinforced collaborations, the TRU have conducted research with a multitude of government organisations, industry partners and academic institutions on topics ranging from physical employment standards and optimal conditioning to tactical equipment integration and operational effectiveness.

Examples of recent collaborations include: Australia and New Zealand Counter Terrorism Committee, NSW Police Force, Australian Federal Police, NT Police Force, Colorado State Patrol, LA Sheriff's Department, Queensland Fire and Rescue Service, the Australian Defence Force, the US Army Rangers, The Singapore Army, The Defence Science and Technology Group, The United States Army Research Institute of Environmental Medicine, Australian Defence Apparel, Optimal Performance Solutions, University of Colorado - Colorado Springs, California State University, Hofstra University, National University of Defense Technology, the AGIS Group, and more.

Examples of the current areas of research and ongoing research projects include: Fitness assessment standards for initial entry, ongoing service and specialist selection; training injury risk identification and mitigation; tactical load carriage and its impacts on lethality, mobility, and sustainability; optimal physical conditioning processes and tactical program training evaluation and validation; thermal effects of Personal Protective Equipment from firefighting clothing to body armour; the impact of body armour on measures of fitness and task performance; training needs and occupational task analysis.

The TRU research team use their extensive research experience from across the tactical spectrum to build a quality, comprehensive knowledge base and effectively gather the information needed to quickly translate their findings into real world applications for front line responders.





Education and Training

More than just research, the TRU realises the importance of application. To this end, the TRU provides education and training services to a plethora of organisations and industry. With the ability to draw on the latest research and an international framework of collaborators, as well as actual practical experience and service, the TRU can customise training and education products to meet the needs of each organisation.

Members of the TRU can provide dedicated, applicable and evidence-based education and training from the tactical through the operational, to the strategic level.

Some of the practical training sessions that the TRU offer include:

- Single session presentations (e.g. on load carriage [ANZCTC] and optimal recruit conditioning [USARIEM, Australian Army, Singapore Army])
- One-day workshops (e.g. optimised operational conditioning [Australian Army Infantry Battalions, the LA Sheriff's Department])
- Three-day Tactical Conditioning Optimisation course (i.e. for general tactical populations run in China and Singapore)
- Four-day National Strength and Conditioning Association Tactical Strength and Conditioning Practitioners Course (i.e. for general tactical populations strength and conditioning coaches)
- 10-day Rehabilitation and Return to Work module (i.e. the Australian Defence Force Physical Training School)

MORE INFORMATION

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