Speaker 1: This is Voices of QueensLAND400.

Anthony Frangi: Hello, and welcome to Voices of QueensLAND400 podcast episode three. I'm Anthony Frangi.

Queensland has much more to offer beyond proven expertise in manufacturing, repair and overhaul of land defence vehicles. It's supported by vocational providers, leading universities and world-class research institutions. Rheinmetall Defence Australia has chosen Queensland as their preferred location for its Australian-New Zealand Headquarters and Military Vehicle Centre of Excellence. Part of its LAND 400 Phase 2 bid to the Department of Defence. Rheinmetall Managing Director, Gary Stewart, says Queensland has the high-tech and innovative industry capabilities required to build and support a new world-class generation of armoured vehicles to protect Australian soldiers.

Gary Stewart: In our view, Queensland rates very highly. When we looked at where to set up our Military Vehicle Centre of Excellence for LAND 400 and other military vehicle programs it was really important to us to ensure that we had access to a proven and capable manufacturing workforce. When you look at the Brisbane-Ipswich corridor, where we've elected to set up our military vehicle centre, there is a great constellation of proven manufacturing industry already in that area, Penske, Volvo, Thales, Holmwood Highgate. The list goes on around heavy vehicle engineering, truck and commercial truck manufacturing and support.

Then you broaden beyond that, and you then begin to take in the whole new family of companies that are involved in the Army's network-centric activities, so their computing and communication technologies. You bring into that arena Elbit, Boeing, Northrop Grumman, Harris, Raytheon, all located here in Brisbane, all contributing towards the design and deployment of those complex systems. We then look beyond that into non-military industry sectors, and with the burgeoning biomedical, mining and utility industries and workforce there's a lot of overlaps and ability for a skilled workforce to move between industries without having to move. We see that as a real level of resilience for what we're trying to achieve in the long-term.

Anthony Frangi: With the variety of skills required to deliver the complexity of the combat reconnaissance vehicles for LAND 400, Gary Stewart says Queensland is already and successfully servicing the heavy vehicle precinct through the defence, commercial and mining industries.

Gary Stewart: It's really important to know that there is already an industry in South East Queensland that is already supporting the Army with equipment like the Bushmaster, with the LAND 121 military logistics trucks that we're delivering to the Australian Army at the moment and having established those industry networks. We know that there is a workforce that has a familiarity with these types of technologies and systems.

Then when we look at some of the more complex technologies and systems coming in with the combat reconnaissance vehicle, fire control-systems, the sensor systems, the computing systems and the weapons systems, they actually rely on a lot of the industry skill sets that already exist here to support Air Force Base Amberley and aircraft like the Hornet and Super Hornet. Having access to that broad skillset of both technical trades, people that can do manufacturing, fabrication, assembly and testing, professional trades, engineers that can actually do software coding, design, validation and innovation, it's all here.

Anthony Frangi: TAFE Queensland has been working and partnering with the defence sector for many years and has the training programs to develop the high-skilled workforce required to deliver LAND 400. Stephen Gates heads apprenticeships management at TAFE Queensland and tells us what make their programs a great success.

Stephen Gates: As an example, we work closely with Haulmark Trailers who are a long-time supplier of the defence sector. We've customised their national training packages to meet the specific skilling needs of their workforce, which is needed to manufacture the trailers to the defence specifications. There's a lot of consultation involved there where we get in and really understand what they're trying to do, what the specifications are and the specific standards where it could be, for example, a certain welding standard or construction method.

Also, TAFE Queensland has partnered with the ADF in the areas of pre-deployment for overseas operations. We've provided targeted training in general construction and engineering skills for ADF personnel that have been involved in restoring infrastructure in overseas communities. One factor that we've learnt working with the defence sector is really understanding the culture in the defence sector. Our trainers have easily adapted and flexible to the needs and culture of the ADF. That's made these programs a pretty big success.

Anthony Frangi: Keeping up with the changes in technology is always challenging, especially in the auto electronics and driverless technologies. For TAFE Queensland these changes have only strengthened its partnerships with some of the country’s biggest manufacturers based here in Queensland.

Stephen Gates: For example, we've got Toyota, Knorr-Bremse, Volvo, Mercedes. We bring them into our training facility, and they can test and train their own staff in our environment. We also include our educators in that process so we can keep up-to-date with that. Our trainers are industry experts. They do have close relationships with industry bodies and key regulatory decision makers, so that also enables us to understand any key regulatory factors that will impact the future of the industry.

We also, through industry placements, we're able to gain insights from designers, technical experts, and work directly with original equipment manufacturers on their product in their environment. That's a big help on keeping up-to-date with a lot of the new technologies. Not only that, we're

also engaged domestically and internationally with several government organisations in undertaking skills needs analysis, skills needs profiling of certain industry sectors to try and cater for the emerging needs. Then we can definitely, from there, profile a specific training requirement, and develop a tailored solution from there.

Anthony Frangi: What are other ways in which TAFE and the state government are working together?

Stephen Gates: TAFE Queensland is the largest public provider of trade and technical training in Australia. We have in excess of 20,000 students annually undertaking studies in automotive, building and construction, electro technologies, mechanical, manufacturing and engineering industries. Being part of the Queensland government we're also able to access the investment that the government's made in the $768 million VET investment plan. That VET investment plan is obviously focused on industry needs and a skilled Queensland workforce. TAFE Queensland is recognised for our pivotal role that it plays here as a pre-qualified supplier of training under the VET investment plan. We also do receive public provider grants and access to other funding to deliver training and assessment services. Those services are typically our core business product at SkillsTech, which is apprenticeship and traineeship training, but we can also access Certificate 3 Guarantee, high-level skills and Skilling Queenslanders For Work funding.

Then more so to address the emerging needs of industry, we have our registered trades skills programs where that's an upfront skills recognition, more targeting existing workers, and where there might be a shortfall of skills in a particular workplace or organisation. What we can do is recognise the existing skills of workers, but also target any emergent training needs that they may have to bring them up-to-date. Those programs have enabled enterprises of all sizes to up-skill workers, and it's been a successful strategy in building workforce capability, dealing with emergent skilling needs and diversifying not only individuals but the enterprises, allowing growth into new markets and new trends.

Anthony Frangi: With South East Queensland quickly becoming the centre for system integration in Australia in areas such as heavy and precision engineering and weapons testing, it's QUT, or the Queensland University of Technology, that's leading the way in the defence innovation and engineering space. QUT deputy vice chancellor in Research and Commercialistion, Professor Arun Sharma, says QUT graduates are ready to work on challenging problems and practical capabilities that employers in the defence sector find very attractive.

Arun Sharma: QUT has been working in research that is relevant to the defence field for the past 15 years. We have worked with industry partners like Boeing and Thales. We're pioneers in unmanned aerial vehicle research where we partner with Boeing and with CSIRO. We continue to do work in autonomous systems that, again, is very relevant for defence.

So far as human capital is concerned, we are one of the largest producers in the country of engineering and IT graduates that are relevant for the defence industry. Being a university for the real word, our graduates are ready to work on challenging problems. They have real world expertise, and they have very practical capabilities that employers in the defence ecosystem find very attractive.

We are home to two of the world's largest research centres in robotics and autonomous systems. One is the CSIRO centre at Pullenvale, and another is QUT's Gardens Point campus. This capability led to the recently-announced Defence Cooperative Research Centre for Trusted Autonomous Systems to come to Queensland. We worked very closely with the Queensland Government to attract this $50 million federal government funding to Queensland. This will enhance the capability that will be relevant for the LAND 400 Phase 2 contracts.

Anthony Frangi: As one of the nation's fastest-growing research universities, Professor Sharma says QUT offers advanced technology and expertise beyond LAND 400 Phase Two.

Arun Sharma: QUT is the largest producer of IT graduates in the country. We produced 500 graduates this year. They are the workforce that is going to contribute to Queensland strengthening its positions as a systems integration hub. We pride ourselves in working on problems that have real world practical experience. We're a university of technology, and we have identified a number of technologies that are disrupting every sector of the economy. We have become world-class in these technologies.

Robotics and automation is something that we have talked about. We are building significant capability in big data and in 3D printing. We believe that the combination of these technologies will have far-reaching impact in every sector of the economy and certainly in defence. We believe that we will be able to identify opportunities in the defence space and other sectors of the economy where we can come up with innovation, train our graduates and contribute to the economic competitiveness of Queensland and Australia.

Anthony Frangi: With a critical mass of defence industry participants, research and development activities and academic institutions between Brisbane and the RAAF Base at Amberley, Gary Stewart from Rheinmetall says they all benefit the LAND 400 program.

Gary Stewart: I think it provides a few ways to the LAND 400 program. The first is they're already undertaking similar projects or similar challenges to support the Air Force or the Army through the battle management and command and control projects. What we see in establishing our Military Vehicle Centre of Excellence right in the heart of that industry constellation is we then provide a focal point for military vehicle and combat vehicle integration and innovation. It's something that neither the military or industry has actually had in Australia, somewhere that within the one campus we can bring in a combat reconnaissance vehicle from Rheinmetall. We can bring in the Army

as the experts and the users of the equipment, the ones that are best-able to tell us whether an idea is good or not.

We can bring in the university researchers from QUT or University of Queensland or from any other research organisation. We can bring in small-to-medium enterprises and those companies and entrepreneurs that have the bright idea. We can put it into the vehicle. We can test it on our track. We can put it through our prototyping lab, and together we can agree and identify what's the best way to maximise the benefit to Army, and then how do we take that technology and turn it into something which can be commercialised, and work with those smaller companies and research organisations to give them a pathway.

Anthony Frangi: If Rheinmetall is the successful bidder, its location in Queensland will complement Queensland's existing land defence and heavy vehicle manufacturing capabilities.

Queensland offers an unmatched combination of competitive advantages uniquely suited to LAND 400 in building a new generation of armoured vehicles to protect our soldiers.

We invite use to join us here in Queensland, Australia's home of land defence. If you would like more information about Queensland's commitment to LAND 400 you can contact us through the Defence Industry Queensland website. I'm Anthony Frangi with music supplied by Bensound.com.