KATHERINE ZIESING | CANBERRA

Four years on from the acquisition of Rosebank Engineering, RUAG Australia has established its Australian footprint, with strong Swiss reach back. *ADM* Editor Katherine Ziesing spoke to Managing Director of RUAG's Australian business about the evolution of the company and where they're headed next.

John Teager

Managing Director RUAG Australia

PROFILE | JOHN TEAGER

2016	Managing Director RUAG Australia
2013	VP Sales & Marketing, RUAG Australia
2009	General Manager, Defence SA
2005	Commander Aerospace Operational Support Group
2005	Commander Task Group 633.4 MEAO
2003	Commanding Officer JEWOSU
1997	Lateral transfer RAF to RAAF
1994	RAAF Staff College/ International Fellowship
1983	Flying – F-4 Phantom fighters
1979	Flying - Vulcan nuclear bombers
1977	Joined RAF

ADM: Can you give us an overview of the RUAG Australia business since buying Rosebank Engineering in early 2013?

TEAGER: RUAG Australia came into being in January 2013 through RUAG Aviation's acquisition of Rosebank Engineering. Rosebank was a well-respected engineering company in Australia, principally serving the Australian defence customer.

RUAG had been developing an internationalisation strategy and looking to extend operations beyond Europe, leaning towards more of a global footprint. RUAG Aviation had long had a strong interest in becoming part of Australian Defence industry and the Australian market.

RUAG Aviation recognised the potential synergies that could result not only in a strengthened offering to the RAAF, but also possible benefits returning to the Swiss Air Force, who operate a younger fleet of F/A-18s and for which RUAG Aviation has full through life support responsibility.

The RUAG Group, headquartered in Switzerland but with a rapidly growing international presence, has a workforce of just over 8,000 people and generates around A$2.5 billion in revenue across five technology groups – Aviation, Aerostructures, Space, Defence - which is principally land systems - and Ammotec, which produces small calibre ammunition. Whilst RUAG is a Prime contractor to Armasuisse and the Swiss Armed Forces, it is not intended for RUAG to be a Prime in Australia. RUAG Australia's focus is on being a partner of choice to the Commonwealth and, increasingly, to OEMs, in our core engineering specialisations of component and subsystem manufacture and repair.

From an aircraft perspective, if you were to consider everything that is not airframe, not avionics and not primary propulsion, then what remains is RUAG Australia's core business, and we've been providing those support services to the ADF for more than 20 years. From a platform perspective, we've supported F 111, C-130, P-3, PC 9, Sea King, Sea Hawk, CH-47 and, of course, the F-18. We continue to support those platforms that are still in service, but we are gradually extending our capabilities to include the newer aircraft types, in particular the F-35.

Noting that we are a manufacturer as well as a component MRO supplier, our customer locations include Malaysia, NZ, Europe, the UK and the US. Approximately 25 per cent of our business is export and, if all goes to plan, that proportion will increase markedly in coming years.

ADM: Can you provide details of the work RUAG will be undertaking on the Laser Cladding Repair Technology development in the wake of your recent CTD win?

TEAGER: Research and technology is an important element of our activities and the reason for that is because we live in a rapidly evolving industry. Over the next 5-10 years we're going to see some major changes in the way we go about our business and the way the aviation sector looks at through life support, component repair and manufacturing. We're aiming to be ahead of the pack.

We've managed to achieve global recognition for what we're doing in the development of advanced repair and manufacturing solutions. We've been working on additive manufacturing technologies for a long time, going back over a decade. Laser deposition is just another member of the direct metal deposition family and an evolving focus for us.

Originally, we began our research looking at supersonic particle deposition (SPD) techniques. Laser deposition is a similar, but different methodology for achieving the same end state. By using laser techniques, we gain some additional capability. We can overcome some of the limitations

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that you get with existing methods such as SPD. Laser techniques can provide a higher bond strength and gives us an ability to access more restrictive spaces within an aircraft airframe.

The concept of additive manufacturing has been around for many years. The key success factor for us has been the ability to supply an application that is acceptable to the user, in other words, a certified repair.

We have worked very closely with the Director General Technical Airworthiness in Australia, who has assisted us greatly to be able to get our SPD repairs into service. To date, we have approximately 50 certified SPD solutions flying on ADF aircraft. These repairs have contributed greatly to reducing the cost of corrosion as well as the demand for spare parts by reclaiming components that may otherwise have been scrapped.

With laser techniques, we are currently at the proof of concept stage with a view to delivering a broader suite of solutions to address the corrosion issue. The cost of corrosion to defence forces is probably in the hundreds of millions of dollars per year which is why customers, whether in Australia or overseas, are extremely interested in the development of this capability.

> "Fortunately, in that regard, **RUAG Aviation is strongly supportive** of RUAG Australia's contribution to the F-35 program."

We work very much hand-in-glove with academia and with defence research organisations, including the Defence Science and Technology Group (DSTG) and with the Defence Materials Technology Centre (DMTC); we are very much partners on these endeavours.

Together with DSTG and DMTC, we have developed some successful laser deposition applications for the F-18. As I mentioned, we are still at proof of concept stage, but we are hoping for an initial capability by end of 2017 and some certified solutions by the end of 2018. It's a staged approach – first working together to develop the technology and the techniques, then to prove them and then to deliver the capability.

ADM: The F-35 sustainment work that you mentioned before, what does that look like in terms of head count and where you think you'll base that facility?

TEAGER: F-35 MRO is just the latest chapter in the book for us. We've been involved in the F-35 program for a long time, right back to 2003 and the system development and design stage when we first started manufacturing hydraulic components. Manufacturing is a natural lead in to MRO and we have always had a strategy to be engaged on both activities for the F-35.

The aircraft is, after all, going to be the backbone of RAAF combat aircraft capability for decades to come. We've been manufacturing actuation components and landing gear components since the mid-2000s.

When the opportunity arose last year, we bid for the F-35 component MRO work.

One thing that is extremely important to us is our relationships with the component OEMs, because they are the ones that produce the systems in the first place, hold the intellectual property and control the manufacturing and sustainment licences and the partnership agreements sought by companies such as ours.

The first component MRO assignments were announced by the US JPO and by Defence Industry Minister Christopher Pyne late last year. RUAG Australia was very pleased to be assigned four of the research technology groups, all of which are directly in line with our core capabilities.

We were assigned landing gear, including wheels and brakes, the auxiliary power systems, hydraulic and mechanical components and valves. In delivering that support, we will be very much building on our existing capabilities but, naturally, some adaptation and investment will be required.

Fortunately, in that regard, RUAG Aviation is strongly supportive of RUAG Australia's contribution to the F-35 program and the global support solution.

In terms of how many people within our company would be involved, it would probably be fair to say most of them because it's very similar work to what we do now. It's just a matter of business evolution – a natural transition from F-111 through Classic Hornet, to Super Hornet and the F-35.

An additional contribution that RUAG Australia makes to the F-35 program is in providing in-country metal component processing. As far back as 2008, aircraft OEMs in the US had identified a shortage in Australia of processing in terms of both capability and capacity. With the help of the South Australian government, we established at Wingfield in South Australia a fully automated, state of the art, large part, high volume metal processing facility with complementary, co located non-destructive testing and paint capabilities.

The principal customer was BAE Systems Australia, who are manufacturing the metallic components for the F-35 vertical tail fins as well as other components. Wingfield exists to support their manufacturing effort and to help them, and other Australian aircraft component manufacturers, win additional work.

As the capability has evolved over the last couple of years, it is naturally starting to attract the strong interest of manufacturers in a variety of sectors as well as aviation. What began as a start-up in 2014 in a slow and difficult market, is now an essential and valued element of Australia's manufacturing sector.

ADM: Do you see any near-term opportunities for RAAF or further regional MRO work, particularly when it comes to the PC-7s or the PC-9s that Australia and Malaysia both operate alongside the Classic Hornets?

TEAGER: Looking first at the Australian market and, in particular, support to the ADF we want to continue to provide that support long into the future, working alongside primes where appropriate.

Most of our current contracts are directly with the Commonwealth, but with evolving Commonwealth contracting models favouring a single contract with a TLS prime or aircraft OEM, we are more and more exercising our partner of choice concept and strengthening our existing relationships.

From a Malaysian perspective, that's interesting for us because our engagement with Malaysia predates the RUAG acquisition. Rosebank had a long, enduring and extremely positive relationship with the RMAF and they remain a very significant and important customer of ours today.

We are in fact the only Australian defence company that currently has a contract to provide support to the RMAF and we provide a broad suite of MRO capabilities as well as engineering services and training.

We are working with the RMAF to further expand our own offering as well as

RUAG Australia has a long history of supporting RAAF platforms.

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helping them to identify other Australian capabilities that may be of value to them. Naturally, as the RMAF's F-18 and other fleets age, our knowledge and experience in obsolescence management and advanced additive manufacturing repair solutions is of much interest to the Malaysian Department of Defence.

The F-18 has naturally been the primary focus, but we also support other RMAF platforms, including the S61 Nuri and the C-130.

ADM: In Kuala Lumpur you've got the RUAG starter/generator centre of excellence. Is there any opportunity for something similar in Australia perhaps?

TEAGER: Very much so. RUAG Malaysia is like a sister organisation to us. RUAG Aviation has grown its footprint in Malaysia as it has in Australia, but on a smaller scale and with an initial focus on commercial helicopter components.

What started off as a sales office in Kuala Lumpur has now become a small, but capable MRO facility that should expand over time to include a broader suite of capabilities and customer base. We certainly anticipate and are working towards an inter-business relationship between ourselves and RUAG Malaysia, which naturally will also include RUAG Aviation business units in Europe.

Clearly, there are opportunities for RUAG Australia to leverage commercial opportunities through RUAG Malaysia, as there is also the opportunity for RUAG Malaysia to make a local contribution to Malaysian defence industry. A feature of our relationship with the RMAF has been in developing the concept of a blended work force where contractors and service personnel work side by side to mutual benefit.

Similarly, we have over a number of years, promoted discussion with the RMAF and exposure to performance based contracting, which has led in part to an evolving relationship between relevant experts in the respective Australian and Malaysian defence departments.

ADM: In defence we hear a lot of talk about people being the best asset that any company has. What does your people equation look like? Are you having trouble getting the skilled people you need? Are you training your own?

TEAGER: I'm very proud to say that we have a highly skilled, highly versatile, highly motivated workforce and I'd like to think that they all enjoy working for us. That's certainly my goal, to make RUAG Australia a fun place to work and for everybody to have a genuine opportunity to realise their full potential. We've managed to achieve significant growth over the last four years and we've done that with the same amount of people as we had in 2012, mainly through multi-skilling, improved productivity, continuous improvement programs, better processes and inclusive problem solving.

As we go into the future, yes, we're probably going to need to recruit more people on the production side, but our preference wherever possible is to develop and grow our capability by promoting internally and focusing the majority of our recruitment on apprentices and graduates. I don't actually foresee a problem in recruiting those people.

Our attraction, we hope, is that people want to work for RUAG Australia because of the company that we are and our culture. Life is too short not to enjoy what you do and that's important to us. To say that people are the most important capability may be a cliché but it's true, without good people you don't have a capability.