Defending Australia's Future

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Tasked with the herculean responsibility of constructing the next generation of Australian warships, the Air Warfare Destroyer Alliance is using innovation and a cohesive culture to deliver outcomes.

Images by David Evans

The Air Warfare Destroyer Alliance (AWD Alliance) is the largest defence procurement project in Australia's history. The alliance's objective is to build and deliver three Hobart Class Destroyers, named HMAS *Hobart*, HMAS *Brisbane*, and HMAS *Sydney*, to the Royal Australian Navy in 2016, 2017, and 2019.

The AWD project is the largest defence project ever undertaken in Australia, and is being executed under an alliance-contract framework. The AWD Alliance comprises the Defence Materiel Organisation representing the Australian Government, ASC as the lead shipbuilder, and Raytheon Australia as the mission systems integrator. The representatives of these three entities form a virtual organisation, referred to as the AWD Alliance, focused on the core objectives of the project and outcomes: to build a highly skilled naval shipbuilding industry for the future, and supply the next generation of warships that will effectively defend Australian shores. Understandably, this is essential for Australia's future prosperity and security.

As an island continent, Australia has sovereign rights over a vast area of ocean, along with fishery, mineral, and petroleum resources. Australia's Maritime Jurisdiction covers more than 16 million square kilometres of ocean. Australia's economy depends on the free movement of import and export items with our trading partners, and Australia requires a highly capable navy with leading-edge technology and resources to protect this area.

The $8-billion Air Warfare Destroyer Program will provide the Royal Australian Navy with three of the world's most capable multimission warships. The Hobart Class Destroyers will be hugely versatile, combining offensive and defensive weapons, long range and endurance, with the ability to perform a command-and-control role with both the Australian Defence Force and coalition forces. They will be able to provide air defence for accompanying ships and support diplomatic missions.

The destroyers will be equipped with the Hobart Class Combat System, consisting of the Aegis Weapon System along with other Australian-selected capabilities. When the Hobart Class Destroyers enter service, they will join around 100 Aegis-equipped warships operating across the globe.

To deliver the destroyers for this vital service, the AWD project directly employs more than 2,500 people, including project managers, engineering specialists, supply-chain personnel, and highly skilled trade persons.

CEO of AWD Alliance Rod Equid is dedicated to achieving this grand vision. Rod has been a key member of the AWD team since ›

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December 2005, when he was seconded from Raytheon Australia. Rod initially worked as the Raytheon executive representative during the establishment of the AWD Systems Centre in Adelaide and was soon selected to lead the Evolved Design Team.

During the second phase of the project, he and his team worked to mature a new ship design, identifying cost, schedule, and risk, which was presented to the Australian Government as one of two options considered for phase three of the AWD project. At this early stage, Rod was one of the initial project team that substantially contributed to establishing the current culture of cooperation between the partners in the AWD Alliance.

Engaging and uniting the representatives from the Defence Materiel Organisation, ASC, and Raytheon into a cohesive team has been one of the priorities for Rod in his role as CEO. To meet this objective, Rod has utilised his defence industry experience, leadership training, and expertise developed throughout his extensive career.

Rod has been active in the defence industry for 15 years, following a career of 20 years with the Department of Defence as a serving member and a defence civilian. In his early career, Rod became a highly regarded test-and-evaluation flight-test specialist.

He was instrumental in establishing new test and certification techniques to support the introduction of software-intensive aerospace systems into defence service. Rod also managed international test programs conducted at the Woomera range, and in 1996 was jointly awarded the D.J. Knights Trophy in recognition of his achievements in flight testing.

After completing his military service, Rod joined the defence industry with an SME organisation that was subsequently acquired by Raytheon. As a member of the senior management team, Rod played a pivotal role in the exponential growth of Raytheon Australia during which Raytheon has grown and developed in Australia to its current position as a trusted partner of the Australian Defence Organisation.

Rod holds a Master of Science in Aerosystems Engineering from the Loughborough University of Technology in the United Kingdom, and was awarded the Royal United Institute prize for academic achievement during his associated studies. Rod also completed a Bachelor of Electrical Engineering with Honours from Monash University, which complements his broad range of technical and leadership learnings.

When approaching an intimidating and complex project like the AWD Hobart Class, Rod says it's important to know every inch of the project as well as every talent and characteristic of the team around you. "I have been on the project for quite a long time," says Rod. "I started towards the end of 2005 and was the senior Raytheon person in South Australia at that time. Back then, the project was looking at requirement definition, design options, and procurement work, and we are now building and producing the three ships. Basically, we have moved from shuffling papers to building our first 7,000-tonne warship. There is a lot of planning, and you have to break it down into bite-sized pieces, which are all managed in a detailed schedule. ›

"Working for AWD has been a benefit for MG Engineering. MG Engineering's management systems, workmanship, and professionalism have been raised to the highest standards within the industry, as it has been a requirement on the AWD project."
- Anthony Brdar, Managing Director, MG Engineering

"We have our challenges as well, and it is easy to focus on the obstacles. We are a large and complex enterprise. We are a new team doing things for the first time on a tight time line. You come across problems along the way in every project of this magnitude, and I find the real test is how the team deals with those issues, moves past them, and stays focused on progress."

With such a large and diverse workforce, Rod initially found it hard to build cohesion throughout the organisation. "The culture itself is a challenge. There are a large number of people who have been newly hired in this project. For example, 95 per cent of the tradespeople in the production workplace have been specifically hired into this project and have not worked on a shipbuilding project before. It's a great credit to ASC to get those people trained and working together as a productive production team.

"If you look at the scale of this enterprise, we are going to spend more than 25 million people-hours on this project, and that is fairly similar to the effort that went into building the Sydney Harbour Bridge. This project was a twinkle in someone's eye prior to the *Defence 2000 White Paper*. In net, it is a 50-year enterprise from the white paper concept until the ships leave service 35 years from now. Some of the men and women who will serve on these ships have not even been born yet."

Rod says he views his role within this gargantuan enterprise as a people person. "I am about making the alliance work and getting everyone on the project to work as one team. Leadership is all about setting a vision for success, listening, empowering people—and, to some extent, getting out of the way to allow people to get on with it.

"You have to be humble enough to change your mind if there is a better way of doing things. I am also fond of the statement around leadership concerning stewardship: if you can provide subtle guidance and get to a situation where your people are successful and think they did it themselves without you, then that is a great leadership outcome."

This focus on people and the team has been a consistent theme throughout Rod's time at the AWD Alliance. "I remember in Adelaide very early in the AWD project when six people walked into this big building and we thought, 'How are we going to get the people to fill this building?'

"Now we have the people we need on board, and we've established a one-team focus for the conduct of the AWD project. I talk to a lot of employees up and down the company. I don't like organisational layers because of the risk of not understanding what is going on at the coalface and at a deep level of detail."

According to Rod, getting the right people on board was a challenge the AWD Alliance, with its participant organisations, has tackled head-on. "The alliance developed a workforce plan to determine the skills and the number of people needed for each area of the business. We have progressively worked through the plan over time.

"It was a rapid growth path, but it was staged to ensure the participant organisations were able to keep up with the growth. We now have an alliance workforce of about 1,700 employees from ASC, Raytheon, the Department of ›

"A project of this scale and importance is both demanding and challenging as we work to deliver world-class quality. The AWD project is a unique opportunity for our company and our people to contribute to a project of national significance." - David Miller, Managing Director – Ship Building, Forgacs

Defence, and Navantia. If you include our major shipbuilding subcontractors, we have a total national workforce of about 2,500 people working directly on the AWD project."

Rod says he united this large workforce by utilising his defence training and experience. "In defence, you learn very quickly that you need collaboration and teamwork to succeed. From the outset, I have tried to instil a similar attitude throughout the AWD project team. If we work together in a best-for-project way, we will achieve our shared goal and thereby experience success for everyone. Over time, we have grown a culture of collaboration, and we are working to maintain that same focus throughout the project.

"Navantia, a key and reliable partner to AWD Alliance, delivers excellence in proven design for AWD and state-of-the-art combatant shipbuilding technology. Here in Australia for the operational life of its vessels, Navantia Australia is dedicated to enhancing Australia's defence capabilities."
- Francisco Barón, Managing Director, Navantia Australia

"I worked in the air force and in systems test and evaluation, so I have a strong desire to understand how things work. Also, the military is all about working as a team. Working together and getting the best out of people are the sorts of leadership and experiential things I brought forward from being in defence."

The leadership challenges within the AWD Alliance are significantly more demanding than the obstacles faced by many other senior executive roles. Rod says the unique microcosm of the AWD Alliance is a challenge in itself.

"The alliance arrangement itself is very interesting. In the AWD project, we have three participants that are all signatories to one contract, the Alliance Based Target Incentive Agreement: the Defence Materiel Organisation—in alliance language, we call them the owner–participant—and ASC and Raytheon Australia, who are the industry participants.

"ASC and Raytheon provide people and processes to undertake the work, but we have central management of all the work. In that way, we have created a virtual organisation, the AWD Alliance, to execute the project rather than a more typical contractual arrangement with people working in their own 'stove pipes'. The virtual organisation includes personnel from each of the participants, including the government, through the Defence Materiel Organisation and navy personnel."

With personnel from both ASC and Raytheon and participants from the government and the Defence Materiel Organisation, the engagement and cohesiveness of the staff was an important issue to be resolved early in the project. "The merging of different work cultures to form the alliance has been a challenge from the outset," states Rod. "We have worked hard to develop an alliance culture through various methods, including the make-up of our teams, the location of our workforce, education, and the communication and branding for the project.

"We set up our teams to involve a mix of people from different parent organisations and different areas of the business such that they work towards common project goals. Our management team has a good cross-section of participant organisation personnel, which instils the team approach from the top down.

"The majority of our workforce is located at Techport Australia in Adelaide, with another smaller group based at Macquarie Park, Sydney. This has meant that most people are working alongside colleagues from different parent companies and are sharing ideas and learning from each other every day." ›

Additionally, the project has its own branding, which is included on internal and external communications, signage, email addresses, and access passes. Rod claims that this branding has helped remove perceived barriers within teams and allowed everyone to focus on the job at hand.

"From a problem-solving perspective, we always start the conversation with determining the best-for-project outcome rather than expending energy on deciding who to blame when things go wrong. This is critical to the project's success and filters out other competing factors such as organisational self-interest."

Rod says he's been careful to separate himself from his original company, Raytheon, to work in the alliance CEO role, and resigned from his position in the Raytheon leadership team when he took on the CEO role. "In developing the alliance culture, we have educated the team about the need to adopt a best-for-project approach and forgetting their former allegiances. We have explained how that approach is ultimately the best outcome for each participant organisation. There is one contract and one core pool of funding. We talk about the money as the target cost, and the way the project works is that the industry participants get paid fee-based on collective, not their individual performance. We are managing work centrally as a virtual organisation, and the participant organisations only benefit or profit from the joint achievements made by that virtual organisation.

"This simple business arrangement immediately changes the team culture and ensures everyone is focused on the project outcomes instead of their own patch. This drives consultation and collaboration and a best-for-project focus on decision-making. Education is also critical to ensure everyone understands the alliance contract model and the appropriate approach. The business deal enables us to think in terms of the best outcome for the project. As a result, there are plenty of examples of people setting aside the interest of their own organisations to make decisions that are best for the project outcome and therefore ultimately best for all."

With a cohesive culture, improved productivity, and streamlined processes, the AWD Alliance is well on its way to deliver its objective and complete the largest defence project in Australia's history. "It is a really exciting time to be on the project because things are happening quickly," states Rod. "We are now consolidating the first ship and we can see practical progress every day.

"We have the first ship taking shape on the hardstand. It is more than 50 per cent complete at the moment, and that has happened relatively quickly. We will go from the first blocks [ship modules] to a complete hull in a bit over a year. Seeing the hull grow that quickly is spectacular. It is good for the people here as they can see the work happening. The first hull will be fully integrated early in 2014.

"In the second part of 2014, the ship will be launched, with some completion work to be conducted before the sea trials program and ultimately delivery of the first ship to the customer in 2016. Ships two and three will be also well underway by the time we are entering the trials program for the first ship."

According to Rod, the current construction and eventual completion of the future HMAS *Hobart* will be an important step for the team. "As we head closer to delivery of the first ship, there will be growing excitement, confidence, and pride in our achievement, which will help drive the remainder of the project.

"Building a first-of-class ship always has a level of risk and many challenges. As we proceed through to each phase of the project and grow in our experience, we will continue to strengthen the bond within the teams and across the alliance."

In addition to constructing this impressive structure, the alliance is also working to help improve the way the navy educates and trains its men and women. Each of the three destroyers will be crewed by 180 men and women from the Royal Australian Navy.

As part of the alliance's training and support requirements, a bridge-training console for the integrated platform-management system (IPMS) is up and running in the Maritime Skills Centre at Techport Australia, where the crew of the future destroyer *Hobart* will be trained from early 2014. It is the first of 10 training systems being set up in Adelaide by the alliance.

The IPMS is a complex training system which uses a variety of operating systems, applications, and simulation software to allow trainees to experience the realism of being on board the ship and having control of the ship's systems, including propulsion, steering, electrical distribution, auxiliaries, and damage control.

In 2013, a computer-generated animation was developed and released that highlighted the multi-mission capability of the three naval destroyers. Rod says the animation will improve understanding of the exceptional capabilities available in the Hobart Class, and provide insight into how the ships can be used in-service. "The animation will be shown to defence personnel, and is also expected to be used for recruiting purposes to help attract people interested in joining the forces and serving on the ships in the future."

> "Getting to where we are on the project today has been an achievement in its own right. In comparison to how we have performed, we are good at beating ourselves up about things that go wrong, and we need to get better at celebrating success."
> - Rod Equid

As Rod looks back on the past eight years of the alliance and considers the long future stretching out ahead of him and his team, he says it's been an amazing journey. "Getting to where we are on the project today has been an achievement in its own right. In comparison to how we have performed, we are good at beating ourselves up about things that go wrong, and we need to get better at celebrating success.

"We have had our issues; they are not surprising in a program of this magnitude and complexity. But compared to what could have happened, the alliance arrangement has helped us through high levels of communication and collaboration, a focus on the project outcome, and a focus on overcoming issues rather than attributing blame.

"In our arrangement, there is no point in blaming one another, because it doesn't benefit anyone. There have been examples where issues have come up and we have had to work together to get a solution without impacting the program from a scheduling perspective and with little to no cost impact. We've always overcome our issues and moved on."

Under the leadership of Rod and his team, the next generation of Australian warships will be constructed at the Techport Australia site in Adelaide. Through the tireless hard work and innovation of 2,500 Australians, three of the most technologically advanced warships Australia has ever seen will be defending its shores by 2019.